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THE INDIAN SUGAR INDUSTRY— (1939 Annual)

By Mr. M. P. GANDHI, M.A.

Chief Commercial Manager : { Rohtas Industries Ltd.
Dalmia Cement Ltd.
Kharkhari Coal Co. Ltd.

Member : U. P. and Bihar Sugar Control Board,
Bihar Labour Inquiry Committee,

Director : Indian Sugar Syndicate Ltd.

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PREFACE

It has given us considerable satisfaction to find that our 1935, 1936, 1937 and 1938 Sugar Industry Annuals have received a progressively cordial welcome and highly encouraging response, from a very large circle of readers, officials as well as non-officials, interested in this great National Industry of India. Appreciative reviews of the Annual have also appeared in the leading national and International Journals. This has doubtless encouraged us to continue the regular publication of this Annual which may claim to be the only authoritative and indispensable reference book endeavouring to give up-to-date statistical and other relevant information about the course of the Industry from year to year. It will be a matter of great pleasure to us if the 1939 Annual meets with the same response as its predecessors.

As we have dealt with the various important events of the industry in the body of this Annual in considerable detail, it is hardly necessary for us to lay any stress here on the important problems now confronting the Industry.

We shall be glad if the various Governments, Provincial as well as Central, continue to take a sympathetic interest in the development of this industry and thus enable it to maintain its important place in the National Economy of the country.

We have indicated briefly the main lines on which such assistance is needed, and we will be happy if the suggestions made in this Annual are given effect to for improving the efficiency of the Industry.

As we have observed in the Annual, we except a slightly smaller production of sugar during the year 1939-40 than the estimated consumption of sugar in the country. In this connection, we are glad to find that the estimate of production of sugar for the year 1939-40 made by the Director of the Imperial Institute of Technology, Cawnpore, only a few days ago, is practically the same as ours.

We have referred to the U. P. and Bihar Joint Power Alcohol Committee's Report and have also observed how the Government of U. P. passed the Power Alcohol Act. The Act, however, has not yet received the assent of the Governor of the Province. We hope, however, that both the Government of U. P. and Bihar will take suitable action for the manufacture of Power Alcohol out of molasses, and its compulsory admixture with petrol, as has been done successfully in Mysore in 1939.

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We shall consider ourselves amply rewarded if this publication will succeed in focussing the attention of all interested in the Industry, viz., the Government, the manufacturers, the cultivators, the consumers and the general public, to the imperative and urgent necessity of initiation of measures for the stabilisation and consolidation of this great national industry which has stopped the drain of about 15 crores of rupees a year for the import of sugar from foreign countries, which is supporting about 20 million agriculturists whose interests are indissolubly linked up with the future of this industry, which has given scope for the investment of indigenous capital to the extent of about 30 crores of rupees, which has created employment for a bout one lakh of workers, including about 2500 graduates in Science, Engineering, Arts, and Commerce, which is also responsible for a considerable addition to the wealth of the agriculturist, as a result of the higher monetary return from the land, consequent on the cultivation of improved varieties of sugar cane, and which has also led to the promotion of the village industry of gur-manufacture.

Our object in dealing comprehensively with the various problems of the industry and of giving detailed statistics is, *inter alia* to educate public opinion and to make such information easily available within the reach of the ordinary reader without his having to make any special effort for the same. Nothing will give us greater pleasure than to see this object being fulfilled. In order to facilitate reference, we have given important legislative measures pertaining to the industry and 42 statistical tables in the earlier portion of the book called "The Sugar Industry at a Glance." We hope it will be found convenient and helpful. "The Sugar Industry at a Glance" contains the text of the Sugar Industry (Protection) Act 1932, the Sugar Industry Protection (Temporary Extension) Act, 1938, the Sugar Industry (Protection) Act, 1939, the Sugar (Excise Duty) Act, 1934, Extracts of important Articles from the Text of the International Sugar Agreement, Notifications prohibiting export of Sugar by sea, Summary of Recommendations of the Tariff Board, Resolution of the Government of India on the Recommendations published on the 30th March, 1939, Extracts from the Hon'ble Finance Member's Budget speech for 1939-40, the U. P. and Bihar Sugar Factories Control Acts as amended, and the *personnel* of the U. P. and Bihar Sugar Control Board, for 1939-40. We have also given extracts of important Rules from the U. P. and Bihar Sugar Factories Control Rules, as amended. We have also given the text of the U. P. Power Alcohol Act, 1939.

In Appendix I, we have given a complete and up-to-date list of the Sugar Factories in India, showing the location, district, the nearest

railway station and the nearest steamer station, the daily cane crushing capacity, names and addresses, including telegraphic addresses of the Managing Agents or Proprietors.

Last year, we expressed the hope of publishing the Annual earlier than before, but we regret to have to say that this year also the publication has been delayed, due partly to the fact that very important and far-reaching changes were made by the U. P. and Bihar Governments later in the year, i.e., in the months of October and November, 1939, in regard to the basis of fixation of minimum prices of Cane, and the introduction of a new sliding scale therefor. Due to our desire to pass these measures under review and to comment upon them, in order that the value of the Annual may continue right till the end of the next year, being up-to-date, we have thought it fit to delay the publication. We trust that the readers will appreciate this, and that they will find our inclusion of these measures and our comments thereon to be useful.

Finding, however, that there is a demand for earlier publication of this Annual, we have decided to do so with effect from next year. The 1940 Annual will, therefore, be published on 30th September, 1940.

As, however, this Annual is published so late, we hope that with its up-to-date statistics, and other recent information, particularly in regard to the fixation of cane prices by the U. P. and Bihar Governments, it will be of greater use to the various Governments, Provincial and Central, and also to the Tariff Board, if one is appointed, as announced by the Government, during the year 1940, for determining the measure of protection required by the Industry for the remaining period, i.e., from April 1941 to 31st March, 1946.

We feel, however that due to the abnormal circumstances created by the War, there is not much point in the conduct of a fresh Tariff Enquiry. We, therefore, suggest for the consideration of the Provincial as well as Central Governments that no fresh Tariff Enquiry should be undertaken, and the attention of the Industry should not be distracted in this direction. The Government of India themselves can determine from the material in their possession the extent of protection required by the Industry. It is essential, however that they should decide about the quantum of protection to be given for the *entire* period ending 31st March, 1946, and announce it with a view to remove the suspense of the Industry in this respect.

We take this opportunity of thanking Mr. R. C. Srivastava, Director, Imperial Institute of Sugar Technology, Cawnpore, for the very valuable and willing help he has given to us at all times. We are also thankful to Mr. Vishnu Sahai, Cane Commissioner, Government of U. P. and Mr. V. K. B. Pillai and later Mr. C. A. McLean, Cane Commissioners, Government of Bihar and several other Officials for the great help they have rendered to us in making this publication authoritative and up-to-date.

We are also grateful to Mr. J. N. Ghosh, Deputy Director of Commercial Intelligence and Statistics, Calcutta, for the very valuable information, he has kindly supplied to us from time to time.

At our request, the Hon'ble Dr. Syed Mahmud, Minister for Development and Employment Bihar, had expressed his willingness to write a Foreword to this Annual, but due to the weak state of his health since October, 1939, we have not thought it fit to trouble him, and are publishing this Annual without his foreword. We hope that when the next Annual appears, we will have the good luck of having a foreword from his pen.

M. P. GANDHI

For Gandhi & Co. (Publishers).

Residence :
30, Puddupukur Road,
Calcutta
25th December, 1939.

The Indian Sugar Industry— (1939 Annual)

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The Sugar Industry at a Glance, 1939

Sugar Industry (Protection) Act, 1932

ACT NO. XIII of 1932

An Act to provide for the fostering and development of the Sugar Industry in British India.

Whereas it is expedient, in pursuance of the policy of discriminating protection of industries in British India with due regard to the well-being of the community, to provide for fostering and development of the sugar industry for a period ending with the 31st day of March, 1946, by determining the extent of the protection to be conferred up to the 31st day of March, 1938, and by making provision for the determination of the extent of the protection to be conferred for the remainder of the period; It is hereby enacted as follows:—

Short Title

1. This Act may be called the Sugar Industry (Protection) Act, 1932 (Amendment of Schedule II, Act VIII of 1894).

2. (1) In the Second Schedule to the Indian Tariff Act, 1894 (VIII of 1894), there shall be made the amendments specified in the Schedule to this Act.*

(2) The amendments made by sub-section (1) shall have effect up to the 31st day of March, 1938.

Statutory Enquiry

3. The Governor-General-in-Council shall cause to be made by such persons as he may appoint in this behalf, an inquiry to ascertain if the protection of the sugar industry during the period from the 31st day of March, 1938, to the 31st day of March, 1946, shall be continued to the extent conferred by this Act, or to a greater or lesser extent, and shall, not later than the 31st day of March, 1938, lay his proposals in this behalf before the Indian Legislature.

*Sugar and Sugar Candy, excluding confectionery—Protective Import Duty Rs. 7-4-0 per cwt. A revenue surcharge of 25 per cent was also imposed, and thus the total import duty was Rs. 9-1-0 per cwt. from 1st April, 1932.

Power to Increase Duty Imposed by Section 2

4. If the Governor-General-in-Council is satisfied, after such inquiry as he thinks fit, that sugar not manufactured in India is being imported into British India at such a price as is likely to render insufficient the benefits intended to be conferred upon the sugar industry by the duties imposed by Section 2, he may by notification in the *Gazette of India*, increase such duty to such extent as he thinks fit.

Power to make Rules requiring Returns

5. The Governor-General-in-Council may, by notification in the *Gazette of India*, make rules requiring the owners of sugar factories in British India to make such returns relating to the production of sugar in their factories as the Governor-General-in-Council may consider to be desirable; prescribing the form of such returns, the dates of their submission and the authority to which they shall be submitted.

Power to make Rules requiring Notices of Price of Sugarcane to be posted up in Sugar Factories

6. (1) The local Government may, by notification in the local official Gazette, make rules requiring that there shall be affixed, in conspicuous places near the entrances to sugar factories, notices for the information of sellers of sugarcane, and such rules may prescribe the form and languages of such notices; and the particulars to be included therein relating to prices at which sugarcane is being bought at the factory.

(2) In making such rules the local Government may provide that a contravention thereof shall be punishable with fine which may extend to five hundred rupees.

Explanation.—In this section and in section 5 “factory” has the meaning assigned to it in clause (3) of Section 2 of the Indian Factories Act, 1911 (XII of 1911).

Sugar Industry Protection (Temporary Extension) Act, 1938 *

ACT NO. XIV of 1938

An Act to provide for the temporary continuance of the existing protection conferred on the Sugar Industry in British India.

Whereas it is expedient to provide for the continuance for a XIII of 1932 period of one year of the existing protection conferred on the sugar industry in British India and to extend the date before which the Central Government is required under section 3 of the Sugar Industry (Protection) Act, 1932 to lay before the Indian Legislature the proposals referred to in the said section, it is hereby enacted as follows:—

1. This Act may be called the Sugar Industry Protection
Short Title (Temporary Extension) Act, 1938.

2. In Section 3 of the Sugar Industry (Protection) Act 1932,
AmendMent of Section 3, Act XIII of 1932 for the figures "1938" whereas they occur for the second time, the figures "1939" shall be substituted.

3. In the first schedule to the Indian Tariff Act, 1934 for item
Amendment of First Schedule Act XXXII of 1934 No. 17 the following shall be substituted: namely:—

"17 Sugar, excluding confecti- onery.	Protective.	The rate at which excise duty is for the time being leviable on sugar, other than khand-sari or palmyra sugar, produced in British India, plus Rs. 7-4-0 per cwt."	Upto March 31 1939"
--	-------------	--	---------------------

*Received assent of the Governor-General on the 8th April, 1938.

**Statement of Objects and Reasons appended to the
Sugar Industry Protection (Temporary Extension)**

**Bill, 1938, introduced in the Legislative
Assembly.**

The Sugar Industry (Protection) Act, 1932, provides for the amount of tariff protection to be given to the Indian sugar industry up to the 31st March, 1938, and requires the Governor General in Council to lay his further proposals for continuing the protection to the same extent, or to a greater or less extent.

The Indian Tariff Board have recently submitted a Report the examination of which Government have not found it possible to complete in time to comply with this requirement. It is proposed therefore to amend the Sugar Industry (Protection) Act so as to continue protection at the existing rate for one year more and to enable Government's further proposals to be laid before the Legislature before the 31st March, 1939.

New Delhi

The 24th March, 1938.

Sugar Industry (Protection) Act, 1939†

ACT NO. XX of 1939

An act to provide for the continuance for a further period of the protection conferred on the sugar industry in British India

Whereas it is expedient to provide for the continuance for a further period of the protection conferred on the sugar industry in British India, and to extend the date before which the Central Government is required under section 3 of the Sugar Industry (Protection) Act, 1932 to lay before the Indian Legislature the proposals referred to in the said section ;

It is hereby enacted as follows :—

1. This Act may be called the Sugar Industry (Protection) Act, 1939.
Short Title

2. In section 3 of the Sugar Industry (Protection) Act, 1932, for the figure “1939” the figure “1941” shall be substituted.
Amendment of Section 3 of Act XIII of 1932 *

*As amended, section 3 of Act XIII, 1932, viz., the Sugar Industry (Protection) Act, 1932, will read as under:—

3. The Governor-General-in-Council shall cause to be made by such persons as he may appoint in this behalf, an inquiry to ascertain if the protection of the sugar industry during the period from the 31st day of March, 1941 to the 31st day of March, 1946, should be continued to the extent conferred by this Act, or to a greater or lesser extent, and shall, not later than the 31st day of March, 1941 lay his proposals in this behalf before the Indian Legislature.

†Received assent of the Governor-General on the 21st April, 1939.

3. In Item No. 17 of the First Schedule to the Indian Tariff Amendment of First Schedule to Act XXXI of 1934** Act, 1934:—

(a) In the fourth column, for the words and figures "plus Rs. 7-4-0 per cwt." the words and figures "plus Rs. 6-12-0 per cwt" shall be substituted;

(b) in the last column, for the figure "1939" the figure "1941" shall be substituted.

It is hereby declared that it is expedient in the public interest that clause 3 of this Bill shall have immediate effect under the Provincial Collection of Taxes Act, 1931.

XVI of 1931

**As amended, Item No. 17 of the First Schedule to the Indian Tariff Act, 1934, will read as follows:—

17. Sugar, excluding confec tionery.	Protective.	The rate at which excise duty is for the time being leviable on sugar, other than <i>khandsari</i> or <i>palmyra</i> sugar, produced in British India, plus Rs. 6-12-0 per cwt.	Upto March 31st, 1941.
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Note:—The total Import Duty (including the equivalent excise duty of Rs. 2 per cwt) on sugar will be Rs. 8-12 per cwt from 1st April, 1939, upto 31st March, 1941.

STATEMENT OF OBJECTS AND REASONS APPENDED
TO THE SUGAR INDUSTRY (PROTECTION) BILL, 1939,
INTRODUCED IN THE LEGISLATIVE
ASSEMBLY.

The object of this Bill is to continue the protective import duty on sugar for a period of two years at a slightly reduced rate pending a further enquiry into the industry in 1940 as announced in the Government of India, Commerce Department, Resolution No. 127-T (2) 38, dated 30th March, 1939.

New Delhi,
The 28th March, 1939.

Sugar Excise Duty Act, 1934 *

ACT NO. XIV OF 1934

(Incorporating amendments made up to March, 1939).

*An Act to provide for the imposition and collection of
an Excise Duty on Sugar.*

Whereas it is expedient to impose an excise duty on sugar produced in factories and to provide for the collection thereof: It is hereby enacted as follows:—

1. (1) This act may be called the Sugar (Excise Duty) Act, 1934.
Short title and extent

(2) It extends to the whole of British India; including British Baluchistan and the Sonthal Parganas.

2. In this Act, unless there is anything repugnant in the subject Definitions or context:—

(a) "Factory"** means any premises in any part of which any manufacturing process connected with the production of sugar is being carried on or is ordinarily carried on with the aid of power;

(b) "owner" includes any person expressly or impliedly authorized by the owner of a factory to be his agent in respect of such factory;

(c) "Sugar" means any form of sugar containing more than ninety per cent. of sucrose;

*Received assent of the Governor-General on 1st May, 1934

**With a view to make small Khandsari sugar factories liable to the payment of the Excise Duty, which they were evading by splitting the process of manufacture and having the different processes performed in separate premises, the following words were dropped after premises in Clause 2 (a) "wherein or within the precincts of which twenty or more workers are working or were working on any day of the preceding twelve months and" by an amendment under clause 3 of the Indian Finance Act, 1939.

(d) "Khandsari Sugar" means sugar in the manufacture of which neither a vacuum pan nor a vacuum evaporator is employed; and

(e) "Palmyra Sugar" means sugar manufactured from jaggery obtained by boiling the juice of the palmyra palm.

3. (1) A duty of excise shall be levied on all sugar produced in any factory in British India and either issued out of such factory on or after the 1st day of April, 1934, or used within such factory on or after the said date in the manufacture of any commodity other than sugar, and shall be payable by the owner of the factory.

(2) The duty payable under sub-section* (1) shall be at the following rates, namely:—

- (i) on khandsari sugar at the rate of ten annas per cwt.;
- (ii) on all other sugar except palmyra sugar at the rate of one rupee and five annas per cwt.;
- (iii) on palmyra sugar at such rate, if any, as may be fixed in this behalf by the Governor-General-in-Council after such enquiry as he may think fit.

4. (1) If any duty payable under section 3 is not paid within the time fixed by rules made in that behalf under this Act, it shall be deemed to be an arrear, and the authority to which such duty is payable may, in lieu thereof recover any sum not exceeding double the amount of duty unpaid which such authority may in its discretion think it reasonable to require.

(2) An arrear of duty, or any sum recoverable in lieu thereof under this section, shall be recoverable as an arrear of land revenue

*With effect from 28th February, 1937, the Excise Duty was increased to Re. 1 per cwt. on Khandsari sugar and Rs. 2 per cwt. on all sugar except Palmyra sugar. With effect from 28th February, 1939, the Excise Duty on Khandsari sugar was decreased to 0.8.0 per cwt. by an amendment under Clause 3 (b) of the Indian Finance Act, 1939. But this duty was made applicable to Khandsari sugar manufactured with the aid of power irrespective of the number of workers employed in a factory. Section 2 (a) of this Act was accordingly amended by Clause 3 (a) of the Indian Finance Act, 1939, whereby in the definition of 'factory' any reference to the number of twenty or more workers employed was omitted.

There is no excise duty levied on Palmyra sugar, the production of which is small.

and shall be recoverable in addition to, and not in substitution for, any other penalty incurred under this Act.

5. No person shall issue any sugar out of a factory, except in accordance with the provisions of rules made in that behalf under this Act, or until such rules are made, in accordance with the general or special orders of the Local Government.

Issue of Sugar from factory

6. (1) The Governor-General-in-Council may, by notification in the *Gazette of India*, impose on sugar brought into British India from the territory of any State in India, not being territory which has been declared under section 5 of the Indian Tariff Act, 1894, to be foreign territory for the purposes of that section, a duty of customs equivalent to the excise duty imposed by this Act on sugar produced in British India.

Power of Governor-General-in-Council to impose custom duty on Sugar VIII of 1894

(2) The Governor-General-in-Council may, by notification in the *Gazette of India*, declare that the provisions of the Land Customs Act, 1924, shall apply to the levy of the duty of customs imposed under this section, and on such declaration that Act shall apply as if the expression "foreign territory" in that Act included territory forming part of a State in India.

XIX of 1924

7. Whoever contravenes the provisions of section 5 shall be punishable with fine which may extend to two thousand rupees.

Penalty for issue of sugar from factory in contravention of sec. 5

8. Whoever evades or attempts to evade the payment of any duty payable by him under this Act, or fails to supply any information which he is required by any rule made under this Act to supply, or knowingly supplies false information shall be punishable with imprisonment which may extend to six months or with fine which may extend to two thousand rupees, or with both.

Penalty for evasion of duty or failure to supply information

9. Any court trying offences under this act, may order that any sugar, together with the packages or coverings thereof, in respect of which the Court is satisfied that an offence under this Act has been committed, shall be forfeited to His Majesty.

Power of Courts to order forfeiture of sugar

10. The Governor-General-in-Council may, by notification in the *Gazette of India*, declare that any of the provisions of the Sea Customs Act, 1878, relating to the levy of and exemption from customs duties, drawback of duty, warehousing, offences and penalties, confiscation, and procedure relating to offences and appeals shall, with such modifications and alterations as he may consider necessary or desirable to adapt them to the circumstances, be applicable in regard to like matters in respect of the duty on sugar imposed by section 3:

Application of the provisions of Act VIII of 1878 to the duty on sugar VIII of 1878

11. (1) The Governor-General-in-Council may, by notification, in the *Gazette of India*, make rules to carry into effect the purposes and objects of this Act.

Power of Governor-General-in-Council to make rules

(2) In particular, and without prejudice to the generality of the foregoing power, such rules may—

- (a) provide for the assessment and collection of the duty and the authorities by whom functions under this Act are to be discharged, the issue of notices requiring payment, the manner in which the duty shall be payable and the recovery of arrears;
- (b) regulate the issue of sugar out of or the use of sugar in the manufacture of commodities within any factory and provide for the appointment of officers of Government to supervise within any factory such issue or use;
- (c) impose on the owners of factories, and on persons engaged in the sale of sugar, the duty of furnishing information, keeping records and making returns and prescribe the nature of such information and the form of such records and returns, the particulars to be contained therein, and the manner in which they shall be verified;
- (d) provide for the detention of sugar for the purpose of exacting the duty, the confiscation otherwise than under section 9 of sugar in respect of which breaches of the Act or rules have been committed, and the disposal of sugar so detained or confiscated;
- (e) authorize and regulate the inspection or search of any place or conveyance used for the manufacture, storage or carriage of sugar; and
- (f) authorize and regulate the composition of offences against or liabilities incurred under the Act and rules.

(3) In making any rule under this section the Governor-General-in-Council may provide that a breach of the rule shall, where

no other penalty is provided by this Act, be punishable with fine not exceeding two thousand rupees.

(4) The Governor-General-in-Council may delegate all or any of his powers under this section to a Local Government.

Northern India Sugar (Excise Duty) Order, 1938

Bifurcation of Central Excises and Salt Deptt. in 1939.

N. B.—The Sugar (Excise duty) order, 1934, was replaced by the Northern India Sugar (Excise Duty) Order, 1938, which came into effect from 1st April, 1938. This change was due to the centralisation of the administration of Central Excise.

From 11th December, 1939, the Government of India decided to divide the Central Excises Salt Department into two independent charges, viz., Central Excises and Salt Department, North-Eastern India, with headquarters at Calcutta, and the Central Excises and Salt Department, North-Western India, with headquarters at Delhi. These two departments will be under the charge of two Collectors designated Collectors of Central Excises and Salt, North-Eastern India and North-Western India respectively. The areas of jurisdiction of these collectors are mentioned below :

Collector of Central Excises and Salt, North-Eastern India. (Headquarters: Calcutta)	United Provinces (the Districts of Gonda, Partabgarh, Fyzabad, Bahraich, Jaunpore, Sultanpore, Ballia, Ghazipur, Benares, Azamgarh, Allahabad, Mirzapur, Banda, Basti and Gorakhpur), Bihar, Bengal, Central Provinces and Assam.
Collector of Central Excises and Salt, North-Western India. (Headquarters: Delhi)	Punjab, United Provinces (except the Districts mentioned below against Collector of Central Excises and Salt, North-Eastern India), North-West Frontier Province, Delhi, Ajmer-Merwara and the British territory under the Jurisdiction of the Resident in Central India.

Extracts of important Articles from the Text of the International Sugar Agreement* to which India has become

*For the full text of the Agreement, *vide* The Indian Sugar Industry, 1937 Annual, 250 pages. This Agreement was signed in May, 1937, by representatives of Governments of 21 major sugar producing countries of the world.

a signatory and by which she has been prohibited from exporting sugar by sea elsewhere than to Burma (for a period of five years) up to 31st May, 1942.

ARTICLE 16

(a) *The Government of India undertakes to prohibit exports of sugar by sea elsewhere than to Burma during the period of the present Agreement.*

(b) *In the event of re-export of Indian sugar by sea from Burma rendering the Government of India's contribution to the present Agreement ineffective, the Government of India will take up the matter with the Government of Burma with a view to reaching arrangements which will render the Government of India's contribution effective.*

ARTICLE 50

(a) *Subject to the provisions of Article 51, the present Agreement shall remain in force for a period of five years from the date of its entry into force and shall not be subject to denunciation.*

Prohibition of Export of sugar from British India by sea.

Customs. New Delhi, the 1st January, 1938.

No. 1.—In exercise of the powers conferred by section 19 of the Sea Customs Act, 1878 (VIII of 1878), the Central Government is pleased to prohibit the taking by sea out of British India of sugar in any of its commercial forms, except the product sold as final molasses:—

Provided that nothing in this notification shall be deemed to apply to—

- (a) sugar manufactured outside India, and
- (b) sugar exported to Burma or to a State in India.

Exemption of Jaggery from prohibition of export.

Copy of the Instruction dated the 14th February, 1938.

Issued by the Government of India in the Finance Department

For purposes of Notification 1 Customs, dated 1st January, 1938, cane and palmyrah jaggery may be treated as final molasses and no objection raised to its export from India to normal destinations,

The Indian Sugar Industry & Present Protection.

—o—

The Report of the Indian Tariff Board on the Sugar Industry was submitted to Government of India in December, 1937, and published by them on 30th March, 1939, along with a Resolution of the Government of India on their recommendations, continuing the protective Import Duty on sugar for a period of two years, ending on the 31st March, 1941, at a slightly reduced rate viz., Rs. 6-12-0 per cwt. from 1st April, 1939, pending a further enquiry into the industry in 1940, in time to enable a decision to be made as to the quantum of protection for the remaining five years from April 1, 1941.

We give below the following:—

- (1) Summary of Recommendations of the Tariff Board.
(A comparison with the forecast made by us of these recommendations in the 1938 Annual, *vide* page lxxxiv—lxxxvi will show that we were substantially correct in respect of all important recommendations).
- (2) Resolution of the Government of India on the recommendations, published on the 30th March, 1939.
- (3) Extracts from the Hon'ble Finance Member's speech in introducing the Budget of the Government of India for 1939-40 in the Central Legislative Assembly on the 28th February, 1939.

5th November, 1939.

M. P. GANDHI
for GANDHI & CO. (Publishers).

N. B.—A fresh Tariff Board inquiry will be conducted during 1940 to decide about the quantum of protection after 1st April, 1941, upto 31st March, 1946.

SUMMARY OF RECOMMENDATIONS OF THE INDIAN TARIFF BOARD ON THE SUGAR INDUSTRY (1937).

(Vide Pages 166-169 of the Report)

[Tariff Board Report Submitted in December, 1937; Published by the Government of India on 30th March, 1939.]

SUMMARY

(1) An event of importance to the World Sugar Industry was the signing of the International Sugar Agreement in London.

(2) The policy of discriminating protection in the case of the Sugar Industry has been successful beyond expectation in increasing the internal production of sugar and reducing the imports of foreign sugar.

(3) The production of sugarcane in India which in 1936-37, exceeding 4 million acres is generally adequate for the requirements of sugar and gur manufacture taken together.

(4) The area under improved varieties of cane is generally adequate for the requirements of factories but there is room for improvement in the quality.

(5) The number of vacuum pan factories crushing cane and refineries was 149 in 1936-37 and is likely to increase to 158 in 1937-38.

(6) The production of sugar in India by all processes in 1936-37 was 1,254,000 tons, 53,000 tons in excess of the estimated consumption.

(7) We have examined the cost of sugarcane cultivation in all sugar producing provinces and we have come to the conclusion that 4 annas 3 pies is the fair price for the grower including profit.

(8) The price of sugarcane delivered at factory calculated by us is 5 annas 6 pies per maund.

(9) We have gone into the details of the costs submitted by factories in all provinces and we have arrived at Rs. 1-12-0 as the cost of manufacture exclusive of overheads.

(10) The progress in manufacturing efficiency made by the industry since 1930-31 has been satisfactory.

(11) We have assumed for purposes of calculation the economic unit of 500 tons crushing capacity for a factory working 130 days in a season of 150 with a recovery of 9.5 per cent.

(12) On this basis the cost of manufacture in a representative factory including overheads and profits is Rs. 6-13-10 per maund.

(13) For the purpose of deciding the extent of protection for the Sugar Industry for the remaining period of protection it is necessary to take into consideration the fact that internal production of sugar is now in excess of consumption.

(14) India is debarred from exporting sugar by sea except to Burma, which was already a market for Indian sugar, and export of sugar by land is, in present conditions, impracticable to any considerable extent.

(15) An increase in consumption will be inadequate to absorb surplus production.

(16) In these circumstances an increase in imports would have the most serious consequence for the industry.

(17) It is possible that Java sugar could be landed at ports at a price of Rs. 2-7-0 per maund.

(18) In determining the amount of protection required for the remaining period of protection it is necessary to take into consideration the question of freight to markets in coastal provinces from the area where the great majority of factories are situated. Indian sugar is generally inferior in quality to Java sugar to the estimated extent of five annas a maund.

(19) Taking all factors into consideration the extent of protection required for the remaining period of protection is Rs. 7-4-0 per cwt. (Rs. 5-5-0 per maund). Adding the excise duty of Rs. 2 per cwt. we recommend that the present rate of import duty of Rs. 9-4-0 per cwt. be continued.

(20) The main by-products of sugar manufacture, molasses and bagasse, are of great importance.

(21) No outlet can be found for half the molasses at present produced and the price obtained for the quantity sold is so small that no deduction from the cost of manufacture on this account can be made.

(22) There is no probability of a development of the export trade in molasses beyond the quantity already exported.

(23) We recommend the manufacture of power alcohol for admixture with petrol as the only possible means of absorbing surplus molasses.

(24) The possibilities of utilising bagasse for the manufacture of paper boards deserve further investigation.

(25) The marketing organisation of the Industry is in many respects defective.

(26) The standardisation of Indian sugar is now practicable and desirable.

(27) Until Indian sugar is standardised, a 'Futures' or 'Terminal' market is impracticable.

(28) With the increase in production the price of sugar in India has ceased to be governed by the world price or the price of imported sugar and is now determined by internal competition.

(29) *The consumer has every reason to be satisfied with the policy of protection.* He is paying less for sugar than he paid before the advent of protection. The price of sugar in India is to-day cheaper than in any country except Cuba, Java and Brazil.

(30) Present possibilities of export of Indian sugar by sea or land except to Burma are uncertain. We have examined the possibility of export of raw sugar to United Kingdom and find that it is possible after the expiry of the International Sugar Agreement.

(31) While the production of sugar by vacuum pan factories crushing cane has rapidly increased the quantity of sugar produced by refineries, *khandsari* and open pan concerns has since 1934-35 steadily declined.

(32) The production of sugar has been doubled since 1930-31. The fall in the price in 1936-37 suggests that in some areas there was overproduction.

(33) Sugar has to some extent taken the place of gur. Since sugar and gur are largely interchangeable as ingredients in food and drink the quantity of sugar consumed by the class of consumer who uses both gur and sugar is, to some extent, dependent on its price relatively to the price of sugar.

(34) Experiments on the improved methods of gur manufacture should be continued in order to improve the quality.

(35) No special protection is necessary for the gur industry apart from the protection granted to sugar which covers gur.

(35) Research work on the agricultural side of the Sugar industry is inadequate in comparison with other sugar producing countries; in particular research work on insect pests and diseases which are responsible for appreciable damage to the sugarcane is very backward.

(37) Sugarcane research is on right lines and has made good progress at Coimbatore, but the method of translating the results to the ryots' fields is far from satisfactory. The two most urgent needs are an increase in the number of testing stations in provinces and an improved system of trial in experimental plots both in cultivators' fields and in factory farms.

(38) The Coimbatore Research Station should be expanded to provide for new lines of investigation.

(39) An allotment of 3 annas per cwt. from the excise duty is recommended for central research and assistance to provincial agricultural departments.

(40) Research work on the technical processes of manufacture by vacuum pan and open pan systems by the Technological Institute should be continued.

(41) We recommend a Marketing Survey of the Sugar Industry and the publication of more complete and accurate statistical information

(42) We have examined labour conditions in factories and find they are not altogether satisfactory. We recommend that scales of salaries and terms of employment be improved.

(43) We recommend that the possibilities of establishing industries subsidiary to Sugar Industry be investigated.

(44) We have examined the effects of protection on the revenues of the Central Government and find that the revenue from Customs duties on imported sugar is likely to decrease.

(45) The excise duty levied in 1934 to compensate for loss of customs revenue was not excessive *but the additional excise duty levied in 1937, has had unfortunate consequences for the cane grower and manufacturer.*

(46) At the prevailing level of prices we find that the present rate of excise duty is out of proportion.

(47) The manufacture of 'khandsari' sugar has continued to decline. A different method of levying excise duty is suggested.

(48) At the present level of prices *palmyra* sugar will cease to be manufactured if an excise duty is imposed. If the price of sugar rises this branch of the industry can bear an excise duty of 12 annas a maund.

(49) We doubt if a voluntary Selling Organisation will be able to control prices.

(50) We recommend the rationalisation of the Industry under some form of State Control. For this purpose we suggest the convening of an all-India Conference representing all interests at an early date.

Resolution of the Government of India No. 127—T(2)/38, dated 30th March, 1939, on the recommendations of the Indian Tariff Board's Report on Sugar.

"The Tariff Board which in 1930-31 investigated the claim of the Sugar Industry to protection recommended the grant of protection for a period of fifteen years, the measure of protection to be Rs. 7-4 per cwt. for the first seven years and Rs. 6-4 for the remaining period. The Sugar Industry (Protection) Act of 1932 gave effect to these recommendations, except that relating to the measure of protection during the second part of the protection period. The Act required, however, that before the 31st March, 1938, a further enquiry should be made to ascertain what degree of protection was needed by the industry for the remaining period of protection. This statutory enquiry was referred to the Tariff Board under the Resolution of the Government of India dated the 27th March, 1937. The Board submitted its Report in December 1937, but it was not found possible to finish the consideration of the Report before the end of March 1938, and the protective duty then in force was accordingly continued for another year by a formal amendment of the Act of 1932.

2. The main recommendations of the Board are as follows:—

(1) The fair selling price of Indian sugar is Rs. 6-13-10 per maund, to which should be added 9 annas per maund for freight and 5 annas for quality, making roughly Rs. 7-12-0 per maund. Java sugar could be landed at Rs. 2-7 per maund, and the protection required is, therefore, Rs. 5-5 per maund or Rs. 7-4 per cwt. This amount of protection should be granted for eight years.

(2) Permission should be accorded for the manufacture of power alcohol on the understanding that it bears the same rate of duty as petrol.

(3) No special protection is necessary for the "gur" industry, apart from the protection granted to sugar.

(4) Research work on the agricultural side is inadequate, and an allotment of 3 annas per cwt. from the excise duty should be made for central research and assistance to provincial agricultural departments.

(5) A marketing survey of the sugar industry should be undertaken.

(6) The additional excise duty levied in 1937 has had unfortunate consequences for the cane grower and manufacturer. At the prevailing level of prices the present rate of excise duty is out of proportion.

(7) The rationalization of the industry under some form of State control is desirable. For this purpose an All-India conference representing all interests should be convened.

Efficiency

3. The recommendations of the Board besides dealing with the amount of protection required contained proposals which are intended to increase the efficiency of the industry by measures much wider in scope than anything previously contemplated. These proposals cover a very wide field and necessitate consultation between the Central and Provincial Governments and the other interests concerned, and the Government of India have accordingly confined their examination to the recommendation dealing with the measure of protection.

4. The Board has proceeded on orthodox* lines in taking the difference between the estimated "fair selling price" of indigenous sugar and the landed price of imported sugar as the measure of protection required. The "fair selling price" is found to be Rs. 7-11-10 per maund and the landed price to be Rs. 2-7 per maund, the difference being Rs. 5-4-10 or Rs. 5-5 per maund in round figures. The Board has thus come to the conclusion that Rs. 7-4 per cwt. (equivalent to Rs. 5-5 per maund) is the amount of protection required for the remaining period of protection.

Government's Recommendation.

5. The Government of India have carefully examined the detailed calculations on which the Board has arrived at its estimate of the "fair selling price," and are disposed to consider, in the light of recent

*We fail to understand the purpose of this criticism. All the Tariff Boards have adopted this principle. In this connection, it would be of interest to note the terms of reference outlined by the Government of India themselves for the special Textile Tariff Board appointed in September, 1935, under the Chairmanship of Sir Alexander Murray, wherein it was explained that "by adequate protection is meant duties which will equate the prices of imported goods with the fair selling prices for similar goods produced in India." We cannot thus appreciate how the Tariff Board went wrong in adopting this criterion for determining the quantum of protection to the industry (*vide* page No. 137 of the Indian Cotton Textile Industry, Its Past, Present and Future, with which is incorporated the 1937 Annual, and page 8 of the Indian Cotton Textile Industry, 1939 Annual).

information, that the figures proposed by the Board for certain items, notably manufacturing costs and profit, and for adjustment of difference in quality are susceptible of reduction. They also consider questionable the assumption that Java sugar, the selling price of which so vitally affects the measure of protection, can be sold exduty at as low a figure as Rs. 2-7 per maund. The Calcutta c.i.f. quotations for Java white sugar remained well over Rs. 3-8 per maund during the first four months of the current financial year, and have thereafter averaged Rs. 4-3-8 per maund. The Board's figure was based on special and purely temporary conditions in Java and is no longer accurate, when those conditions no longer obtain. World sugar market conditions have improved since the Board wrote its Report and with the satisfactory working of the International Sugar Agreement there has been a return of confidence and with it an improvement in the world prices.

Change in Situation.

6. There is another, and even more important, factor, namely, the recent changes in the Indian industry itself, which must be taken into consideration when examining the proposed protective duty. While the examination of the Tariff Board's report has been in progress, the situation has changed so fundamentally that the report—through no fault of the Board's—is already out of date. The application to the sugar industry of an elaborate and extensive system of control by the United Provinces and Bihar Governments and their decision to levy a provincial cess on cane supplied to the factories and to enforce minimum price regulations more rigidly than in the past have produced new and unexpected conditions which have so modified the basis of the Board's Report that it is not possible to fix the level of protection for the whole of the unexpired term without a further inquiry. The industry, however, is still in an unstable position and it must be given sufficient time to adapt itself to the new conditions before a further investigation can usefully be undertaken. The Government of India propose, therefore, to fix the amount of protection for a period of two years from April 1, 1939, to March 31, 1941, pending a further investigation to be held in 1940 in time to enable a decision to be made as to the quantum of protection for the remaining five years from April 1, 1941. For the two years, April 1, 1939, to March 31, 1941, the Government of India propose to impose the present protective duty less 8 annas per cwt. The comparatively high prices ruling for Java sugar support the view that this modest reduction will still leave the indigenous industry adequately protected.

Excise Duty.

7. The Government of India cannot allow the Board's remarks on the increase in excise duty in 1937 to pass without comment. In paragraph 2 above a finding set out in the Board's summary to the effect that the present rate of excise duty was out of proportion at the then prevailing level of prices has been quoted. If the body of the report is referred to, it will be seen that this finding did not represent a belief (which would have been clearly unsustainable) that there existed some absolute standard as to what is the appropriate limit for revenue taxation, which in the case of sugar was exceeded by a duty at the rate of Rs. 2 per cwt. Rather, it referred to the Board's contention that a reduction of duty is necessary "unless the price of sugar can be stabilized at a level which will allow of the payment of a fair price for cane to the grower and a reasonable margin of profit to the manufacturer." This conclusion is derived from the earlier finding that the burden of the enhancement of duty made in 1937 fell upon the cane-grower and manufacturer alone. That pronouncement was made in the light of conditions prevailing in 1937 and has already become obsolete owing to the great advance of prices since that time; indeed, conditions have so changed that the two Provincial Governments which are quoted by the Board as having criticized the enhancement of the excise duty have since found it possible themselves to impose additional taxation which is to be recovered from the industry, whatever the shoulders that will ultimately bear it.

Even taking a shorter view, confined to the conditions that prevailed when the Board prepared its report, the Government of India cannot accept as justified the categorical assertion that the enhancement of the duty had no effect on the consumer but that it fell upon the manufacturer and through him upon the cultivator. The Board rests this conclusion upon the following statement: "Consequent on the increase of excise duty, the sugar prices rose by a few annas, but this rise, unlike 1934, was only temporary, and for a few days after which prices fell to even lower levels than before." This is not satisfactory evidence. The market was at the time in a highly disorganized condition owing to overproduction, and there is nothing to show that if the duty had not been imposed prices would not have fallen still lower by an amount equal to, or not far short of, the amount by which the duty was increased. Indeed that hypothesis is more plausible than the one suggested by the Board for the reason that in the absence of effective foreign competition it is the natural and inevitable tendency for indirect taxation to be borne ultimately by the consumer.

Outside their Scope.

Finally, before leaving this subject, the Government of India are constrained to call in question the appositeness of this part of the Board's report. Its task was to determine the extent of protection against foreign competition that should be afforded to the sugar industry and, with the principle already established that the protective element should be added to the amount of excise duty in determining the rate of import duty, the level of the excise duty did not become relevant to that task. It was outside the scope of the Board's inquiry to propound the adoption of a policy of manipulating the excise duty so as to protect the industry against the results of overproduction and uncontrolled competition within this country.

8. The Government of India propose to introduce legislation immediately to give effect to their decision."

Extracts from the Hon'ble Finance Member's Speech in introducing the Budget of the Government of India for 1939-40, in the Legislative Assembly on 28th February, 1939.

"Our estimates for Central Excise duties, which amount to Rs. 8,28 lakhs, also follow our revised estimates except for minor variations. The main component of this figure is the estimate of Rs. 4,00 lakhs from the duty on sugar. I have adopted Rs. 4.00 lakhs as a nominal figure on a review of various conflicting considerations and in conjunction with a figure of Rs. 20 lakhs, also largely nominal, which has been included in the Customs estimates. I am aware that the outturn of the cane crop for the present crushing season points to a considerable shortage in the production of factory sugar during that season. On this basis it would be reasonable to adopt a much lower forecast of the yield of the excise. The financial year however bestrides two crushing seasons and there are other elements of uncertainty in the situation. In the first place, the continuance of high prices for refined sugar must have a depressing effect on the volume of consumption. Secondly, a shortage of factory production can be made up by an expansion of *khandsari* production as well as by imports of foreign sugar. To the extent that *khandsari* production supplies the deficiency the result is that little or no compensation accrues to the revenue for the loss of the excise from factory sugar. On the other hand, imports of foreign sugar more than compensate for the loss of revenue from indigenous supplies. On a careful review of the various conflicting and indeterminate factors in the problem I have come to the conclusion that I should not be justified in assuming a total revenue from both Excise and Customs duties on sugar of more than Rs. 420 lakhs.* I have not made any attempt at a precise apportionment of the revenue to these two heads; the figures under Excise and under Customs are alike nominal. I do however attach considerable importance to the gross figure which represents a considered decision of what we can safely expect from this source.

It will be convenient at this point to say something about the change which we intend to introduce in regard to the levy of Excise duty on *khandsari* sugar. Here we are introducing legislation which will extend the liability to pay duty and will at the same time enable us to reduce the rate of duty. The estimated quantity of *khandsari* sugar produced annually in British India has at various times fluctuated from 100,000 tons

*N.B. This assumption of the Hon'ble finance member was greatly falsified by the very large revenue which accrued to Government as a result of heavy imports of sugar in 1939-40, to meet the deficit between Indian production and Indian consumption.

to upwards of 200,000 tons. Yet the yield of excise duty at the present rate of Re. 1 per cwt. is not more than Rs. 50,000; in other words, the quantity of *khandsari* sugar on which duty is paid is less than 2 per cent of the total production. This is due largely to the definition of a "factory" in the Sugar Excise Duty Act, 1934, which confines the charge of the duty to sugar produced in premises employing 20 or more workers. This liability is easily avoided by the common practice of splitting up the process of manufacture and having the different processes performed in separate premises. The result is not only a loss of revenue but an inequitable incidence of taxation which has given rise to numerous complaints from the sugar mills of unfair competition. It is therefore intended to amend the definition of "factory" in section 2 (a) of the Sugar Excise Duty Act, 1934, so as to omit any reference to the number of workers employed. I should make it clear that there will be no extra burden on the small agriculturist who does not employ mechanical power in any of the processes of sugar production. We propose at the same time to reduce the rate of excise duty on *khandsari* sugar from Re. 1 to annas eight per cwt. We estimate that this change will yield an increase in revenue of approximately Rs. 5½ lakhs, but this figure is included in the general estimate of the Excise revenue from sugar."

TEXT OF
The United Provinces Sugar Factories Control Act, 1938*

(*Act No. 1 of 1938*)

(**As amended by the U. P. Sugar Factories Control
Amendment Act), 1939****

AND OF

The Bihar Sugar Factories Control Act, 1937†

(*Bihar Act VII of 1937*)

(**To Remain in force until the 30th June, 1941**)

As Published in

The U. P. Gazette (Extraordinary)

Dated 11th February, 1938, and 15th July, 1939

AND

The Bihar Gazette (Extraordinary)

Dated 24th December, 1937

Extracts of important Rules from The Bihar as well as the U. P. Sugar Factories Control Rules, 1938, as subsequently amended, and the *personnel* of the U. P. and Bihar Sugar Control Board (1939-40), are also given.

N. B.—The texts of these Acts in the U. P. & Bihar being very nearly the same except for verbal changes here and there, we are giving the text of the amended U. P. Act only (which is also the text of the Bihar Act), and wherever there is any difference in the wording of the Bihar Act, we have underlined the text of the U. P. Act and have given the exact wording of the Bihar Act in the Footnote at the appropriate place on every page. Thus the reader will be able to see at once the exact text of the U. P. Act as well as of the Bihar Act, and at the same time will be able to compare the provisions of both, conveniently.

The text of the amendments made in the U. P. Act in 1939 is given in *Italics*.

*Received assent of the Governor on 10th February, 1938.

**Received assent of the Governor on 29th June, 1939.

†Received assent of the Governor on 22nd December, 1937.

U. P. Government, and Bihar Government.

Sugar Control Board

*Term of Appointment : from 1st July, 1939 to 30th
June, 1940.*

Names of Members :

The Hon'ble Minister for Development, Bihar.	
The Hon'ble Minister for Development, United Provinces.	
Mr. Bipin Bihari Varma, Motihari, Bihar.	} Agriculturists' interests.
Mr. Dip Narayan Sinha M.L.A. Bihar.	
Lala Har Sahai Gupta, M. L. C. (U. P.).	
Thakur Phool Singh, M. L. A. (U. P.).	
Professor Shibban Lal Saksena M. L. A. (U. P.).	
Mr. N. A. Sherwani.	} Manufacturing interests
Mr. D. R. Narang.	
Mr. D. P. Khaitan.	
Mr. B. L. Grey.	
Mr. M. P. Gandhi.	
Mr. S. J. Pagey	... Mercantile interests

Secretary to the Government of the United Provinces in the Industries Department.

Secretary to the Government of Bihar in the Education, Development and Employment Department.

N. B.—The *personnel* of the Sugar Control Board of U. P. and of Bihar is *the same*. Joint meetings are held. Meetings are held at Lucknow or Patna, according to convenience.

The number of members is 15. 5 represent agricultural interests, 5 represent manufacturing interests, 1 represents mercantile interests and 4 are representatives of the Government (two being of U. P. and two of Bihar).

TEXT OF
The United Provinces Sugar Factories
Control Act, 1938.

(AS AMENDED UPTO 1939)

AND

The Bihar Sugar Factories Control Act, 1937

AN ACT

TO PROVIDE FOR THE LICENSING OF SUGAR FACTORIES AND TO REGULATE THE SUPPLY AND THE PRICE OF SUGARCANE INTENDED FOR USE IN SUCH FACTORIES.

WHEREAS it is expedient to provide for the licensing of sugar factories and for regulating the supply of sugarcane intended for use in such factories and the price at which it may be purchased, and for such other matters as may be incidental thereto;

It is hereby enacted as follows:—

CHAPTER I.

PRELIMINARY.

1. (1) This Act may be called the United Provinces Sugar
Short title and Factories Control Act, 1938.
commencement

(2) It extends to the whole of the United Provinces.

(3) This Act shall come into force at once and shall remain in force until the 30th June, 1941.

2. In this Act unless there is anything repugnant in the
Definitions subject or context;—

(a) "advisory committee" means a committee established under section 3;

(b) "assigned area" means an area assigned to a factory under sub-section (1) of section 19;

(c) "Board" means the Sugar Control Board established under section 4;

(d) "cane" means sugarcane intended for use in a factory;

Changes found in the Bihar Act given below:—

1. Substitute "The Bihar Sugar Factories Control Act, 1937."
2. Substitute "Bihar."

- (e) "Cane Commissioner" means the officer appointed to be Cane Commissioner under section 7;
- (f) "cane-grower" means a person who cultivates cane either by himself or by members of his family or by hired labour and who is not a member of a Cane-growers' Co-operative Society;
- (g) "Cane-growers' Co-operative Society" means a society registered under the Co-operative Societies Act, 1912 (Act II of 1912), one of the objects of which is to sell cane grown by its members;
- (h) "Collector" in any provision of this Act includes any officer whom the Governor may, by notification, appoint to exercise and perform the powers and duties of a Collector under that provision;
- (i) "crushing season" means the period beginning on the 1st October in any year and ending on the 30th June next following;
- (j) "factory" means any premises, including the precincts thereof, wherein twenty or more workers are working or were working on any day of the preceding twelve months and in any part of which any manufacturing process connected with the production of sugar by means of vacuum pans is being carried on, or is ordinarily carried on, with the aid of power;
- (k) "occupier of a factory" means the person who has ultimate control over the affairs of a factory;

Provided that where the affairs of a factory are entrusted to a managing agent, such agent shall be deemed to be the occupier of the factory;

- (l) "prescribed" means prescribed by rules;
- (m) "purchasing agent" means a person licensed under this Act to act as a purchasing agent;
- (n) "reserved area" means an area specified in an order issued under section 15;
- (o) "rule" means a rule made under this Act; and
- (p) "sugar" means any form of sugar containing more than ninety per cent. of sucrose.

Changes found in the Bihar Act given below:—

3. Substitute "Bihar and Orissa Co-operative Societies Act, 1935."

CHAPTER II.

CONSTITUTION OF ADVISORY COMMITTEES, THE SUGAR CONTROL BOARD AND OTHER AUTHORITIES.

3. The Governor may, by notification, establish an advisory committee for the province or for any area specified in such notification

Advisory Committees

4. There shall be established for the United Provinces a Sugar Control Board.

Sugar Control Board

5. The Board and each advisory committee shall be constituted in the prescribed manner.

Constitution of Board and advisory committees

6. (1) The Board and every advisory committee shall exercise and perform, in addition to any powers or duties conferred or imposed on them by the provisions of this Act, such powers and duties as may be prescribed.

Power and duties of advisory committees and Board

(2) The business of the Board and of every advisory committee shall be conducted in such manner and in accordance with such procedure as may be prescribed.

7. The Governor may, by notification, appoint any officer to be Cane Commissioner, to exercise and perform, in addition to the powers and duties conferred and imposed on him by this Act, such powers and duties as may be prescribed from time to time.

Appointment of Cane Commissioner

8. (1) The Governor may, by notification, appoint such persons this Act within such local limits as he may assign as he thinks fit to be inspectors for the purposes of to them respectively.

Appointment of Inspectors

(2) No person shall be appointed to be an inspector under subsection (1) or, having been so appointed, shall continue to hold office, who is or becomes directly or indirectly interested in a factory or in any process or business carried on therein or in any patent or machinery connected therewith.

Changes found in the Bihar Act given below:—

4. After the words *the province*, add "of Bihar."
5. Substitute "The Province of Bihar."
6. Delete these words in the Bihar Act.

(3) The Provincial Government may by rules provide for the appointment of such servants of the Crown as it thinks fit to be *ex-officio* or additional inspectors for the purposes of this Act within such local limits as it may assign to them respectively.

(4) Every inspector shall be deemed to be a public servant within the meaning of the Indian Penal Code and shall be officially subordinate to such authority as the Provincial Government may specify in this behalf.

(5) The Provincial Government may by rules provide for the powers to be exercised and the functions to be performed by an inspector.

CHAPTER III.

LICENSING OF FACTORIES.

9. (1) No person shall commence the construction of any building intended to be used as a factory or any extension of the plant of an existing factory which is likely to increase its capacity for crushing cane unless he has been granted a licence by the Provincial Government. An application for a licence under this sub-section shall be made to the Provincial Government in the prescribed form.

(2) The Provincial Government shall prescribe the conditions on, and the circumstances in which, licences will be granted under sub-section (1).

(3) The Provincial Government shall publish a notice of the receipt of any application under sub-section (1) in the Gazette, and such notice shall specify a date on or after which the application will be taken into consideration.

(4) The Provincial Government may, after consulting the Board with regard to the application and the objections received thereto, grant the licence applied for or reject the application, as it thinks fit.

(5) A licence granted under sub-section (4) shall be valid for such period as may be specified therein but may be renewed by the Provincial Government from time to time.

10. (1) After such date as the Governor may by notification specify in this behalf, no cane shall be crushed in a factory unless the occupier thereof has obtained a licence authorizing him to crush cane.

Licences for
crushing cane

(2) An application for such licence shall be made to the Provincial Government in the prescribed form.

(3) On receipt of such application, a licence shall be granted 6A
If the applicant is the occupier of a factory which was in existence on February 10, 1938, or at which cane was crushed for at least 30 days in any crushing season during the five years previous thereto and in which sugar was manufactured direct from cane, or is a person to whom a licence has been granted under section 9.

Provided that the Provincial Government may refuse to grant 6B
 a licence *in any other case or person** to any person, if it has already cancelled or refused to renew, a licence previously granted to such person.

(4) A licence under this section shall be valid till the 30th June 7
 next following and shall be renewable in the prescribed manner. 8

(5) If an occupier of a factory has committed a breach of the conditions of his licence for which penalties have been imposed, the Provincial Government may, after consulting the Board refuse to renew his licence.

11. A licence granted under sub-section (3) of section 10 shall be subject to such conditions as the Provincial Government may, after consulting the Board, impose in respect of all or any of the following matters at the time when the licence is granted:—

- Conditions of
 licences for
 crushing cane
- (a) membership of any organisation of the sugar industry the main object of which is to regulate the sale of sugar and which is recognised by the Provincial Government;
 - (b) the price below or above which, the terms on which, and the persons to whom or organisations to which or through whose agency, any variety, grade or quantity of sugar produced in the factory may be sold; 9
 - (c) the manner in which sugar produced in the factory shall be graded, marked, packed or stored for sale; 10

Changes found in the Bihar Act given belows—

6A. Substitute; after the word granted, and drop the next paragraph in Italics in the Bihar Act.

6B. Drop the words "*In any other case or person*" in the Bihar Act.

7. Substitute: A license granted under sub-section (3).

8. After the words *next following*, add: the date on which it is granted.

9. Instead of the words "which or through whose agency," substitute "to or through the agency of whom."

10. Drop the words "marked, packed or stored for sale," in Bihar Act, and substitute a semi-colon: for a comma after the word graded.

- 12.** The Provincial Government may levy such fee not exceeding one hundred rupees, as may be prescribed for licence fees granted under section 9 or section 10.

(2) The Collector may require any person appointed as manager under sub-section (1) to deposit as security an amount not exceeding rupees one thousand in cash or Government Promissory Notes, and no person shall be deemed to have been appointed as manager until such deposit is made.

(3) Whenever another person is appointed as manager, the occupier shall send to the Collector a written notice of the change within fourteen days from the date on which the new manager assumes charge.

(4) During any period for which no person has been designated as manager of a factory under this section, or during which the person designated does not manage the factory, or has not made the requisite deposit, any person found acting as manager, or, if no such person is found, the occupier himself, shall be deemed to be the manager of the factory for the purposes of this Act and the rules.

CHAPTER IV.
PURCHASE OF CANE.

14. (1) The Provincial Government may by order require the occupier of any factory to submit to the Cane Commissioner, on or before the prescribed date, an estimate, in the prescribed form and manner of the quantity of cane which will be required in the factory during such crushing season as may be specified in the order.

Changes found in the Bihar Act given below:—

11. Drop the words "including conditions of labour" in the Bihar Act, and substitute a full-stop. for the comma after the word *prescribed*

12. Drop the words "made thereunder" in the Bihar Act and add a full-stop after the word rules.

(2) The Cane Commissioner shall examine every such estimate and shall publish the same in the prescribed manner with such modifications, if any, as he may think fit to make therein after consultation with the advisory committee within whose jurisdiction the factory is situated.

(3) An estimate published under sub-section (2) may be revised by the prescribed authority.

15. (1) The Cane Commissioner may, after consulting the advisory committee or committees, if any, of the Declaration of reserved area area concerned and the occupier of the factory and after considering any objections that may be raised, issue an order declaring any area to be a reserved area for the purposes of the supply of cane to a particular factory during the ensuing crushing season, and may likewise at any time cancel such order or alter the boundaries of an area so reserved:

Provided that in the case of a factory situated outside the United Provinces, such declaration shall only be made on receipt by the Cane Commissioner of an application to that effect in the form prescribed from the occupier of such factory and on the condition that the occupier establishes a branch office in the United Provinces, deposits a security of Rs. 5,000 with a Collector in the United Provinces and appoints a person resident in the United Provinces as his manager for the United Provinces.

12B

Provided also that unless the parties concerned consent no portion of an area reserved for one factory shall, so long as the agreements entered into by the occupier of such factory with the cane-growers in such area for the supply of cane remain in force, be included within the reserved area of another factory.

13

(2) An appeal shall lie against the order of the Cane Commissioner under sub-section (1) to the prescribed authority.

16. (1) The Provincial Government may order a survey to be made of the area reserved for a factory under section 15, and may recover the cost of such survey from the occupier of such factory.

(2) Every survey mentioned in sub-section (1) shall be made by an officer appointed by the Provincial Government for this purpose, and the said officer shall exercise and perform such powers and

Changes found in the Bihar Act given below:—

12B. Drop this paragraph in the Bihar Act.

13. Drop this paragraph in the Bihar Act.

duties in making such survey as may be prescribed, and the survey shall be made in accordance with the prescribed procedure.

(3) Every person owning or occupying land in any area in respect of which a survey is being made under sub-section (2) shall afford to the officer making the said survey such assistance and facilities for making the said survey as may be prescribed.

14 (4) Any amount due from the occupier of a factory under sub-section (1) shall be recoverable from such occupier as an arrear of land revenue.

17. (1) The occupier of a factory for the purposes of which an area has been reserved shall maintain a register Maintenance of Register in the prescribed form and manner of all cane-growers and Cane-growers' Co-operative Societies in such area, who offer under section 18, to sell cane to him.

(2) The Provincial Government may by rules provide for:—

(a) the correction of entries in, and the addition of new entries to such register,

(b) the payment of costs in connection with such correction or addition, and the manner in which such costs shall be realised, and

(c) the supply, on payment, of copies of entries in the register.

21 18. (1) A cane-grower or a Cane-growers' Co-operative Society in a reserved area may offer, in the form and by Purchase of cane in a reserved area the date prescribed, to supply to the occupier of the factory, for which the area is reserved, cane grown by the cane-grower or by the members of such Cane-growers' Co-operative Society as the case may be, not exceeding the quantity, if any, prescribed for such grower or Cane-growers' Co-operative Society.

(2) The occupier or manager of a factory for which an area is reserved shall enter into an agreement, in such form, by such date and on such terms and conditions as may be prescribed, to purchase the cane offered in accordance with sub-section (1):

Provided that, he shall not enter into an agreement to purchase cane from a person who is a member of a Cane-growers' Co-operative Society.

Change found in the Bihar Act given below:—

14. For the words "as an arrear of land revenue," substitute "as a public demand payable to the Collector," in the Bihar Act.

(3) Except with the permission of the Provincial Government, cane grown in a reserved area shall not be purchased in such area by a purchasing agent, or by any person other than the occupier of the factory for which such area has been reserved. 15

(4) Cane grow in a reserved area shall not be sold by any person other than a cane-grower or a Cane-growers' Co-operative Society:

Provided that a cane-grower or a Cane-growers' Co-operative Society may deliver cane intended for use in a factory through another cane-grower or through a carrier.

(5) During the crushing season, the Provincial Government may, if it is satisfied that there is likely to be in the area reserved for a factory any quantity of cane available for sale to the occupier of the factory in excess of the quantity for which he is required to enter into agreements, direct that cane shall not be purchased outside the reserved area until the occupier, of the factory enters into agreements to purchase all the cane offered to him in the reserved area:

Provided that such prohibition shall not apply in respect of cane for the supply of which agreements in writing have been entered into before such direction was issued.

19. (1) The Cane Commissioner may, after consulting the Declaration of assigned areas and purchase of cane therein advisory committee or committees (if any) of the area concerned and the occupier of the factory and after considering any objections that may be raised, issue an order declaring any area to be an assigned area for the purposes of the supply of cane to a particular factory:

Provided that in the case of a factory situated outside the United Provinces, such declaration shall only be made on receipt of the Cane Commissioner of an application to that effect in the form prescribed from the occupier of such factory.

(2) Subject to the provisions of sub-section (5) the occupier of a factory for which an area has been assigned, shall enter into agreements for the purchase in the assigned area, of such quantity of cane as may be fixed by the Cane Commissioner.

(3) Such agreements shall be entered into with cane-growers in the assigned area or Cane-growers' Co-operative Societies or pur-

15. For the words "Except with the permission of the Provincial Government," substitute "Unless the Provincial Government otherwise directs," in the Bihar Act.

15B. Drop the colon and substitute a fullstop, for the Bihar Act, and also drop the paragraph in Italics in the Bihar Act.

chasing agents, by such date and in such form and on such terms and conditions as may be prescribed:

Provided that such agreements shall not be entered into with a person who is a member of a Cane-growers' Co-operative Society.

(4) If such an agreement is entered into with a purchasing agent, he shall enter into similar agreements with cane-growers in the assigned area or Cane-growers' Co-operative Societies in respect of all the cane which he has undertaken to supply.

(5) If the cane-growers or Cane-growers' Co-operative Societies in the assigned area are not willing to enter into agreements to supply, or fail to supply, the requisite quantity of cane, the occupier of the factory or the purchasing agent may, after giving the prescribed notice to the Collector, purchase the balance of the cane required from outside the assigned area, unless otherwise directed by the Collector.

(6) An appeal shall lie against an order of the Cane Commissioner under sub-section (1) or sub-section (2) to the prescribed authority.

20. In any area, other than a reserved area, no person shall purchase cane except—
Purchase of cane outside reserved area

(a) the occupier of a factory or a person employed by him for the purpose of making such purchases,

(b) a purchasing agent or a person employed by him for the purpose of making such purchases, or

(c) a Cane-growers' Co-operative Society:

Provided that a person entitled to purchase cane, may take delivery thereof through a cane-grower or through a carrier.

CHAPTER V.

PRICE TO BE PAID FOR CANE.

- 16 **21.** (1) The Governor, after consultation with the Board, may, by notification, determine in respect of any area the minimum price to be paid by occupiers of factories or purchasing agents for cane purchased in that area, or direct that such minimum price shall be calculated in accordance with rules made under this Act.

Power of Provincial Government to fix minimum price

Changes found in the Bihar Act given below:—

16. Drop the words "under this Act" in the Bihar Act, and add a full-stop after the word *made*.

(2) The Governor may, after consultation with the Board, vary, by notification, the price notified under sub-section (1), from time to time, as he thinks fit.

(3) The occupier of a factory or a purchasing agent shall not make any deductions from the amount due for cane sold to him by a cane-grower or Cane-growers' Co-operative Society, except such deductions as may be prescribed, or as the Governor may, by notification, from time to time allow. 17

22. The Governor may, after consultation with the Board, by notification direct that, in addition to the minimum price to be paid for cane, the occupier of the factory shall pay for special varieties of cane to be specified in such notification and which a cane-grower or Cane-growers' Co-operative Society has agreed to supply to him, such additional price as the Provincial Government may direct.

CHAPTER VI.

MISCELLANEOUS.

23. (1) No person shall exercise any of the powers conferred by or under this Act on a purchasing agent unless he has been licensed in the prescribed manner. 18
 Licensing of purchasing agents, etc.

(2) The Governor may, by notification, direct that in any area no person shall be employed by an occupier of a factory or by a purchasing agent to do any work or class of work in connection with any transaction for the purchase of cane unless such person has been licensed in the prescribed manner. 18

(3) A licence shall not be granted to any person under sub-section (1) unless such person has paid the prescribed deposit, or furnished the prescribed security in Government Bonds, and the Collector may, in accordance with rules framed by the Provincial Government, order that the deposit paid or security furnished in respect of such licence shall be forfeited to the Crown or shall not be returned before the prescribed period or that the whole or any portion of such deposit or security shall be paid to any person who 18

Change found in the Bihar Act given below:—

17. Drop the words, "or as the Governor may, by notification, from time to time allow," in the Bihar Act, and Substitute a full-stop for the comma after the word *prescribed*.

18. Drop the underlined words in the Bihar Act.

has suffered any loss owing to the misconduct of the person to whom such licence was granted.

24. The occupier of a factory or any other person acting on his behalf shall not distribute seed cane of any variety to any person to be used by cane-growers or the members of Cane-growers' Co-operative Societies if the Governor, after consulting the Board, has, by an order published in the Gazette, declared that such variety of seed cane is unsuitable for distribution to cultivators.

25. (1) Where the occupier of a factory is a firm or other association of individuals, any one of the individual partners or members thereof may be prosecuted and punished under this Act for any offence for which the occupier of the factory is punishable:

Provided that the firm or association may give notice to the Collector that it has nominated one of its members to be the occupier of the factory for the purposes of this Act, and such individual shall be deemed to be the occupier for the purposes of this Act until further notice cancelling his nomination is received by the Collector or until he ceases to be a partner or member of the firm or association.

(2) Where the occupier of a factory is a company, any one of the directors thereof, or, in the case of a private company, any one of the share-holders thereof, may be prosecuted and punished under this Act for any offence for which the occupier of the factory is punishable:

Provided that the company may give notice to the Collector that it has nominated a director, or, in the case of a private company, a share-holder, to be the occupier of the factory for the purposes of this Act and such director or share-holder shall be deemed to be the occupier of the factory for the purposes of this Act, until further notice cancelling his nomination is received by the Collector or until he ceases to be a director or share-holder.

26. (1) If the Provincial Government is satisfied that there has been a breach of the conditions of a licence granted under section 10, it may refer the same for advice to a tribunal constituted in the prescribed manner, and, on the advice of such tribunal, impose on the occupier of the factory concerned, a penalty which may extend to five thousand rupees or to an amount calculated at annas eight per maund of sugar produced or sold in

contravention of the conditions of the licence, or in case the breach consists of the wilful failure to purchase a minimum quantity of cane, to an amount calculated at a rate not exceeding one anna per maund of cane which he has failed to purchase, and may after a second breach for which a penalty has been imposed, cancel the licence.

19

(2) Any penalty imposed on the occupier of a factory under sub-section (1) shall be recoverable from such occupier as an arrear of land revenue.

27. (1) If any person commences the construction of a new factory, or if the occupier of a factory makes any extension of the plant of the factory, in contravention of the provisions of sub-section (1) of section 9, he shall be punishable with fine which may extend to five thousand rupees.

(2) *If cane is crushed at a factory without a licence having been obtained for the same under section 10 the occupier of the factory shall be punishable with fine which may extend to five hundred rupees for each day on which cane is crushed at the factory without such licence, and the court may order that the factory shall cease crushing cane till a licence for the same has been granted. If the order of the Court to stop the crushing of cane is not complied with, the occupier or manager of the factory or both may be sentenced to imprisonment which may extend to six months.*

19B

(3) If the occupier or manager of a factory—

(a) intentionally fails to maintain correctly the register mentioned in sub-section (1) of section 17, or

(b) intentionally fails to enter into agreements as required by sub-section (2) of section 18 or sub-section (2) of section 19, or

(c) intentionally and persistently fails to purchase cane in accordance with the terms of an agreement entered into

20

Changes found in the Bihar Act given below:—

19. Drop the underlined words in the Bihar Act.

19B. Substitute Sub-section 2 of section 27, in Italics, by the following paragraph in the Bihar Act.

(2) If the occupier of a factory crushes cane without obtaining a licence under section 10, he shall be punishable with fine which may extend to five hundred rupees for each day on which cane is crushed at the factory without such licence.

- 20 under sub-section (2) of section 18 or sub-section (2)
 of section 19, or
- 21 (d) purchases cane outside a reserved area in contravention
 of the provisions of sub-section (5) of section 18, or
- 22 (c) knowingly enters into an agreement with a cane-grower
 who is a member of a Cane-growers' Co-operative
 Society in contravention of the provisos to sub-section
 (2) of section 18 or sub-section (3) of section 19, or
- (f) distributes seed in contravention of section 24,
 23 he shall be punishable with fine which may extend to
 two thousand rupees.
- (4) If a purchasing agent fails to enter into agreements as
 required by sub-section (4) of section 19, he shall be punishable with
 fine which may extend to two thousand rupees.
- (5) If any person knowingly:
- 24 (a) pays for any cane purchased for use in a factory a price
 less than the minimum price or such other price as may
 25 be determined for such cane under the provisions of
 Chapter V, or makes any deduction from the amount
 due for cane sold to him in contravention of the pro-
 visions of sub-section (3) of section 21, or
- (b) purchases or sells cane in a reserved area in contravention
 of the provisions of sub-sections (3) or (4) of section
 26 18, or
- (c) exercises any of the powers conferred by or under this
 Act on a purchasing agent or takes part in any transac-
 tion connected with the purchase of cane in contravention
 of section 20, or section 23, he shall be punishable with
 imprisonment which may extend to six months or with
 fine which may extend to two thousand rupees or with
 both.

Changes found in the Bihar Act given below:—

20. Drop the underlined subsection (c) in the Bihar Act.
 Sub-section (d), (e) and (f) will therefore be sub-section (c), (d)
 and (e) of the Bihar Act.
21. Substitute (c) for (d) in the Bihar Act.
22. Substitute (d) for (e) in the Bihar Act.
23. Substitute (e) for (f) in the Bihar Act.
24. Drop the word "knowingly" in the Bihar Act.
25. For the words "for any cane purchased for use in a factory"
 substitute the words "for cane" in the Bihar Act.
26. Transpose subsection (b) as subsection (a), and subsection (a)
 as (b) in Bihar Act.

(6) Any person contravening any of the provisions of the Act for which no penalty is otherwise provided, shall be punishable with fine which may extend to two thousand rupees.

"27A. (1) No suit, prosecution or other legal proceeding shall lie against the Provincial Government or against any person for anything which is in good faith done or intended to be done under this Act or the rules framed thereunder. 26B

(2) The exercise of any discretion or authority conferred on the Provincial Government or on the Cane Commissioner by this Act shall not be questioned in any Civil Court. 26B

28. (1) No prosecution shall be instituted under this Act Institution of except upon complaint made by or under authority proceedings. from the District Magistrate. 27

(2) On the application of a person accused of an offence under this Act, the District Magistrate may compound such offence by levying a composition fine not exceeding the fine which could be imposed for such offence at any stage before conviction. 27

(3) No Court inferior to that of a Magistrate of the second class shall try any offence against this Act or any order or rule made thereunder.

29. (1) The Governor may, after consulting the Board, by notification, impose a tax on the sale of sugarcane at a rate not exceeding six pies per maund or at a rate not exceeding 10 per cent. of the sale price, and may, by notification, exempt from such tax sales in any area, or any class or classes of such sales, to be specified in the notification. 28
Tax on sale of cane. 29

(2) The Governor may, after consulting the Board, by notification, impose a cess not exceeding six pies a maund on the entry of

Changes found in the Bihar Act given below:—

26B. Drop Section 27-A (1) and (2) in the Bihar Act.

27. For the words "District Magistrate" substitute the words "Cane Commissioner" in the Bihar Act in subsections (1) and (2).

28. For the words "on the sale of sugarcane at a rate not exceeding six pies per maund or at a rate not exceeding 10 per cent. of the sale price," substitute "not exceeding six pies a maund on the sale of sugar cane" in the Bihar Act.

29. Drop the words "after consulting the Board," in the Bihar Act.

sugarcane into a local area, specified in such notification, for consumption, use or sale therein:

Provided that such cess shall not be imposed on the entry into any such area of any sugarcane in respect of the sale of which a tax imposed under sub-section (1) is payable.

(3) The Provincial Government shall make rules specifying the authority empowered to collect the tax or cess and the person from whom, and the manner in which, the tax or cess shall be collected.

30 (4) If any agreement for the sale of cane is entered into before the imposition of a tax or cess under this section, the seller will be entitled to recover from the buyer in addition to, and as a part of, the contracted price, the amount of such tax or cess to which the seller may be liable.

30 (5) All sums payable in accordance with sub-sections (1) or (2) or the rules made under sub-section (3) shall be recoverable as an arrear of land revenue.

30. (1) The Provincial Government may make rules to carry out the provisions of this Act.
Power to make rules.

(2) In particular and without prejudice to the generality of the foregoing power, such rules may provide for:—

- (a) the constitution, powers, duties and procedure of advisory committees and the Board;
- (b) the authorities by which any functions under this Act or the rules made thereunder are to be performed;
- 31 (c) the form and manner in which applications may be made for a licence to commence the construction of a new factory or the extension of the plant of an existing factory, the conditions on which and the circumstances in which such licence may be granted;
- (d) the form and manner in which applications for licences for crushing cane may be made, the terms and conditions of such licences, their renewal, suspension and cancellation and the fees to be charged for the same;

Changes found in the Bihar Act given below:—

30. Drop Subsection (4) and (5) from the Bihar Act.

31. For subsections (c) up to (w) substitute the following subsections (c) up to (t), in the Bihar Act.

- (e) the form in which the notices required by sections 13(1) and 19(5) should be given; 31 contd
- (f) the amount of the deposits referred to in sections 13 and 13 and the terms and conditions on which, and the procedure by which the same may be made, retained or withdrawn;
- (g) the date by which, and the form and manner in which the estimate mentioned in section 14 should be submitted and the manner in which and the places at which such estimate shall be published;
- (h) the procedure to be followed in making a survey under section 16 the manner of calculating the cost of such survey, the amount to be deposited in connection therewith, and the assistance to be afforded by owners and occupiers of land to the officer making such survey;
- (i) the form of the application in which a person offer to sell cane, the date by which such application should be made and the quantity of such cane which may be offered for such sale;

Changes found in the Bihar Act given below:—

(c) the form and manner in which applications may be made for a licence to commence the construction of a new factory or the extension of the plant of an existing factory, the conditions on which and the circumstances in which such licence may be granted.

(d) the constitution of the tribunal mentioned in sub-section (1) of section 26, the powers, duties and procedure of such tribunal and the recovery of costs incurred in connexion therewith.

(e) the form and manner in which applications for licences for factories may be made, the conditions for such licences and the levy of fees in connexion therewith, and the renewal, and cancellation of such licences.

(f) the terms and conditions on which, and the procedure by which, the deposits referred to in sections 13 and 23 may be made, retained or withdrawn.

(g) the date, form and manner for the submission of the estimate mentioned in section 14, and the manner in which and the places at which such estimate shall be published.

(h) the procedure to be followed in making a survey under section 16 and the assistance to be afforded by owners and occupiers of land to the officer making such survey.

(i) the form of the application in which a person offers to sell cane, the date by which such application should be made and the quantity of such cane which may be offered for such sale.

31
contd

- (j) the form of the agreement to be entered into for the purchase of cane, the date by which such agreement should be made and the terms and conditions thereof;
- (k) the quantity of cane to be purchased in a reserved area or in an assigned area by the occupier of a factory during the crushing season for which agreements should be entered into;
- (l) the posting of notices and the maintenance of records, registers and accounts and the submission of returns, the supply of copies of entries therein and the fees to be charged for the same;
- (m) the method by which the minimum price to be paid for cane under this Act shall be calculated or determined and the deductions that may be made therefrom;
- (n) the form and manner in which applications for licences under section 23 may be made, the terms and conditions of such licences, their renewal, suspension and cancellation, and the fees to be charged for the same;
- (o) the constitution of a tribunal provided for in sub-section (1) of section 26, its powers, duties and procedure and the recovery of costs incurred in connection therewith;
- (p) the operation of Cane-growers' Co-operative Societies;

Changes found in the Bihar Act given below:—

(f) the form of the agreement to be entered into for the purchase of cane, the date by which such agreement should be made and the terms and conditions thereof,

(k) the quantity of cane to be purchased by the occupier of a factory during the crushing season for which agreements should be entered into in a reserved area or in an assigned area.

(l) the posting of notices and the maintenance of records, registers and accounts and the submission of returns, the supply of copies of entries therein and the fees to be charged for the same,

(m) the method by which the minimum price to be paid for cane under this Act shall be calculated or determined and the deductions that may be made therefrom,

(n) the procedure, terms and conditions of licences issued under section 23 and their renewal and cancellation,

(o) the organisation and operation of Cane-growers' Co-operative Societies,

(p) the correct weightment of cane,

- (q) the correct weighment of cane, the provision of facilities for weighment and for checking weighments, and timings of weighments; 31 contd
 (r) the payment of the price for cane;
 (s) the regulation of the supply of cane;
 (t) the provision of approach roads and parking space near factories for carts bringing cane to such factories, sheds for cart-drivers and water troughs for bullocks and other kindred matters;
 (u) the reference to the Cane Commissioner of disputes relating to the supply of cane for decision or, if he so directs, to arbitration, the mode of appointing an arbitrator or arbitrators, the procedure to be followed in proceedings before the Cane Commissioner or such arbitrator or arbitrators, and the enforcement of the decisions of the Cane Commissioner or the awards of arbitrators;
 (v) the amount of the tax or cess imposed under section 29 and the authority by which the person from whom, and the manner in which such a tax or cess shall be collected; 31 contd
 (w) the provision of sheds for carts, the proper disposal of sullage water and the speedy disposal of damaged cane. 31 contd
 (3) In making any rule under sub-section (1) or (2), the Provincial Government may provide that a breach of such rule shall be punishable with fine not exceeding two thousand rupees.
 (4) The rules made under this section shall come into force on such date as may be fixed by the Provincial Government. Such rules 32

Changes found in the Bihar Act given below:—

- (q) the payment of the price for cane,
 (r) the regulation of the supply of cane,
 (s) the reference to the Cane Commissioner of disputes relating to the supply of cane or, if he so directs, to arbitration, and
 (t) the authority by which the person from whom and the manner in which a tax or cess imposed under section 29 shall be collected.
 32. Drop subsection 4, and subsection 5 in the Bihar Act.

shall be laid before both Chambers of the Legislature whenever they may meet after the rules have come into force, and if an amendment of any such rule is carried in both the Chambers in the Session following the promulgation of such rules, such rule shall be amended accordingly.

32

(5) Rules made under this section shall be published in the Government Gazette.

- × '31. The Sugarcane Act, 1934, is hereby repealed. The rules Repeat of the issued under the Sugarcane Act, 1934, shall continue Sugar-cane Act, 1934 in force in so far as they are not inconsistent with the provisions of this Act, and are not superseded by any rule made, 33 or notification issued, under this Act.

Changes found in the Bihar Act given below:—

33. Drop the underlined words in the Bihar Act, and substitute the words "until rules are made under the provisions of this Act."

STATEMENT OF OBJECTS AND REASONS APPENDED TO
THE SUGAR FACTORIES CONTROL BILL INTRODUCED
IN U. P. AS WELL AS IN BIHAR.

The Indian Sugarcane Act, 1934 (XV of 1934), is not sufficiently comprehensive for dealing with the problems of the sugar industry, and it has been found necessary to replace it by a new measure which will provide for the better organization of cane supplies to sugar factories.

The Government of the United Provinces and Bihar have decided in consultation with each other to introduce legislation on similar lines for both provinces which together account for nearly 85 per cent. of the production of sugar in India.

2. The Bill deals only with factories worked by the vacuum pan process and its provisions relate to—

- (a) the licensing of sugar factories,
- (b) the regulation of the supply of sugarcane to factories,
- (c) the minimum price for sugarcane,
- (d) the establishment of a Sugar Control Board and Advisory Committees, and
- (e) a tax on the sale of sugarcane intended for use in factories.

3. An unsatisfactory feature of the sugar industry has been the growth of unhealthy competition which has brought down the price of sugar to a very low level. As a direct consequence the price of sugarcane has fallen to such an extent that during the last crushing season the price obtained by the cultivator hardly covered the cost of cultivation. Unless, therefore, steps are taken to regulate the production of sugar, the main object of protection to the industry will be frustrated. The Bill provides for the licensing of new factories and the extension of the plant of existing factories. It is proposed that no such license shall be granted except under certain conditions which are to be prescribed in the rules. The Bill further requires all sugar

*This was similar for the U. P., and Bihar, with the exception of one sentence in paragraph 4.

factories to take out a license before they commence to crush cane. This license will be granted subject to certain conditions relating to the sale of sugar, membership of an organization of the industry recognised by Government and the quantity of cane to be crushed by the factory. These conditions will ensure normal working and at the same time provide effective control over the production of sugar. In order to facilitate effective supervision over production it is proposed to insist on factories becoming members of a central organization of the industry which is recognised by the Provincial Government.

4. As regards the regulation of the supply of sugarcane to factories, the Bill provides for the purchase of cane—

- (a) in an area reserved for a factory,
- (b) in an area assigned to a factory,
- (c) in areas which are neither reserved nor assigned.

In a reserved area if a cane-grower or a Cane-growers' Co-operative Society offers to sell cane to the factory for which the area has been reserved, the factory is bound to enter into agreements with such cane-grower or Cane-growers' Co-operative Society to purchase such minimum quantity of cane as may be prescribed in the rules. In other words, a cane-grower or a Cane-growers' Co-operative Society in a reserved area will be given an assurance that his or its cane will be taken by the factory in accordance with the terms and conditions of an agreement, but the factory will not be bound to enter into agreements with such cane-grower or Cane-growers' Co-operative Society for more than the prescribed quantity of sugarcane. This prescribed quantity will be determined by the area under cane cultivation with a proper system of rotation of crops. Latitude is allowed in fixing the boundary reserved.* The Bill, therefore, makes provision for a survey of reserved areas. The Bill further provides that the factory shall make direct purchases from cane-growers or Cane-growers' Co-operative Societies. Purchasing agents will not be allowed to function within a reserved area. In return for the assurance regarding the purchase of cane the Bill prohibits the purchase of cane within the reserved area by or on behalf of other factories. As in some years there may be over-production of sugarcane within

*Add the following in the Statement of objects and reasons of the Bihar Bill "It is particularly necessary in Bihar where owing to the absence of an up-to-date survey it is almost impossible to obtain reliable estimated of cane areas."

the reserved area, the Provincial Government is given power to direct that the factory shall not purchase cane outside its reserved area unless it first agrees to purchase all the cane available for sale within its reserved area. This provision will not, however, affect agreements entered into by the factory with growers outside the reserved area. The object of creating a reserved area for a factory is to encourage factories to enter into direct relations with growers and to take an interest in the development of cane cultivation within its reserved area.

5. The reservation of areas may not be immediately practicable and it may not be possible for the Provincial Government to reserve an area of adequate size for the supply of cane to each factory. Where no area can be conveniently reserved for a factory or where the area reserved is inadequate having regard to the cane requirements of the factory, it is proposed to assign areas to the factory in which it will be required to enter into agreements for the purchase of a specified quantity of sugarcane. Such agreements may be with cane-growers, Cane-growers' Co-operative Societies or licensed purchasing agents. If an agreement is entered into with a licensed purchasing agent, he must enter into agreements with cane-growers or Cane-growers' Co-operative Societies in the assigned area for the full amount which he has undertaken to supply to the factory.

There are three important differences between a reserved area and an assigned area: firstly, in a reserved area a factory is bound to enter into agreements with all cane-growers or Cane-growers' Co-operative Societies, whereas in an assigned area the only obligation is to enter into agreements for a specified quantity of cane; secondly, in an assigned area, cane may be purchased through a licensed purchasing agent whereas in a reserved area cane can only be purchased direct from cane-growers or Cane-growers' Co-operative Societies; and, thirdly, in a reserved area only the factory for which the area is reserved may purchase cane whereas in an assigned area any factory or its licensed purchasing agent may purchase cane. In assigned areas and in areas which are neither reserved nor assigned cane may only be purchased by—

- (a) the occupier of a factory or any of his employees specially authorised to purchase cane,
- (b) a licensed purchasing agent or any of his employees specially authorised to purchase cane, or
- (c) a Cane-growers' Co-operative Society.

In order to encourage the organisation of Cane-growers' Co-operative Societies, the Bill provides that a factory shall not enter into agreements direct with the member of such Society. Area will be reserved or assigned by the Cane Commissioner subject to an appeal to the prescribed authority.

6. Chapter V of the Bill deals with the fixation of minimum price for sugarcane intended for use in a factory. As drafted, the Bill leaves a wide latitude to the Provincial Government to vary the minimum price and to prescribe rules to determine how the minimum price shall be calculated. Provision is also made for the payment of an additional price for special varieties of cane. In order that undesirable varieties may not be introduced in the province, the Bill prohibits the distribution of seed cane of such varieties.

7. The endeavour has been made as far as possible to avoid encumbering the Bill into unnecessary details. The regulation of matters of detail has therefore been left to rules. This will enable Government to meet any practical difficulties in working. For proper consultation with the industry there will be a Sugar Control Board and Advisory Committees. The former will deal with the major problems, e.g., the licensing of factories and the fixation of a minimum price, whereas the latter will deal with local problems, e.g., the determination of reserved and assigned areas, etc. A Cane Commissioner will be appointed for the administration of the Act. He will be assisted by inspectors, *ex-officio* inspectors and additional inspectors, whose duties and functions will be prescribed by the rules.

8. The penalties provided in this Bill are necessary for proper enforcement and the amounts have been kept sufficiently large so as to prevent evasions.

9. The future of the sugar industry depends to a very large extent on a big drive in the improvement of cane cultivation and its planned production on a rational basis. To enable Government to carry out the necessary measures in this connection, which will involve considerable expenditure, and to take other steps conducive of the welfare of the industry, cane-growers, and agriculturists generally, it is proposed to impose a tax up to a maximum limit of six pies a maund on the sale of sugarcane to a factory or a cess at the same rate on the entry of cane into a local area notified in this behalf for consumption, use or sale therein.

10. The proposals in this Bill are wide in scope and Government feel that the results should be carefully watched before these proposals are permanently adopted. The Bill will, therefore, remain in force only until the 30th June 1941 by which time adequate experience will be gained of its working.

Extracts of Important Rules from
Bihar Sugar Factories Control Rules, 1938
AND
U. P. Sugar Factories Control Rules, 1938
(As Amended up to June, 1939)
are given in the succeeding pages.

Extracts of Important Rules from The Bihar Sugar Factories Control Rules, 1938 •

(As Amended up to August, 1939.)

1. Short title, extent and commencement.—(1) These rules may be called the Bihar Sugar Factories Control Rules, 1938.

(2) They shall come into force on the 15th June, 1938.

3. Advisory Committees.—(1) When an Advisory Committee is established for any area under section 3 of the Act, the Governor shall, by notification, appoint the Chairman and the Secretary thereof. The Governor may also appoint other persons, not being growers or persons interested in factories to be members or *ex-officio* members. The Governor shall, in addition, appoint as members an equal number of representatives of growers and factories, who shall ordinarily be resident of the area in respect of which the Advisory Committee is established.

(2) It shall be the duty of each Advisory Committee—

(a) to recommend ways and means of maintaining health relations between factories and growers;

(b) to make suggestions to regulate the purchase of cane;

(c) to bring to the notice of the Collector cases of breach of any of the provisions of the Act and of the rules made thereunder;

(d) to advise the Cane Commissioner with regard to the cane estimates submitted to the Cane Commissioner under section 14 of the Act and the declaration of any proposed reserved and assigned areas under sections 15 and 19 of the Act;

(e) to advise the Divisional Commissioner or the Collector of the district on any matter which may be referred by them to the Committee for its advice; and

(f) to advise the Chairman and the Provincial Government on any matter which may be referred to the Committee for its advice.

6. (1) The term of appointment of an Advisory Committee shall be for one year, or for such shorter period as may be prescribed by notification.

(2) When the place of a member of an Advisory Committee becomes vacant by the resignation or death of such member, the Governor may appoint a new member to fill the vacancy and such new member shall hold office for the unexpired residue of the term of office of the member in whose place he has been appointed.

7. Sugar Control Board.—(1) The Board shall consist of fifteen members.

(2) The Minister-in-charge of the Education and Development Department of the Government of Bihar and the Secretary to the Government of Bihar in the said Department shall be *ex-officio* members of the Board.

(3) The remaining members shall be nominated by the Provincial Government and shall include an equal number of representatives of factories and of cane-growers.

(4) The Board shall, in addition to the powers and duties conferred or imposed upon them by the provisions of the Act, advise the Provincial Government on all matters connected with the sugar industry of the province that may be referred to it by the Provincial Government.

(5) The Governor shall, by notification, appoint the Chairman and the Secretary of the Board.

(6) The first meeting of the Board shall be held on the date, and at the place and time appointed by the Governor.

(7) The second and all subsequent meetings of the Board shall be held at the headquarters of the province unless the Chairman otherwise directs.

(8) Notice in writing of all meetings shall be circulated by the Secretary to all members not less than two weeks before the date fixed for the meeting, provided that in urgent cases a shorter notice shall be deemed to be sufficient.

(9) The term of appointment of the Board shall be for one year **from 1st July each year, provided that the term of the first Board will be till 30th June, 1939.*

*As subsequently amended, the term of the first Board was up to August, 1939.

(10) When the place of a member nominated to the Board becomes vacant by the resignation or death of such member, the Provincial Government shall nominate a new member to fill the vacancy, subject to the provisions of sub-rule 3, and such new member shall hold office for the unexpired residue of the term of office of the member in whose place he has been nominated.

9. Inspectors.—(1) The Cane Commissioner shall be *ex-officio* Inspector for the whole province.

(2) The Divisional Commissioner, the Collector of the district and the Subdivisional Officer shall be *ex-officio* Inspectors within their respective jurisdictions.

All the Inspectors within a district shall be subordinate to the Collector of the district and all Inspectors within a division shall be subordinate to the Divisional Commissioner.

10. Powers of Inspectors.—An Inspector may, within the local limits of his jurisdiction,—

(a) enter any place which is, or which he has reason to believe to be, used as a factory or any place where cane is weighed or payment is made therefor, and make such examination of the weigh-bridges and of any records, registers and accounts maintained in connection with the purchase of cane;

(b) cause carts or wagons carrying cane or consignments of cane to be weighed or re-weighed in his own presence;

Provided that cane loaded in wagons may not be required to be unloaded for the purposes of re-weighment;

(c) record the statement of any person whom he may deem necessary to examine for the proper discharge of his duties;

(d) call for from the occupier or manager of a factory any information relating to the production, supply and crushing of cane, the manufacture of sugar, and the quantity of sugar produced, issued and in stock;

(e) call for from a purchasing agent, a cane-grower or a Cane-growers' Co-operative Society any information relating to the production, cultivation and supply of cane;

- (f) issue from time to time such instructions as may be necessary to ensure equitable purchase of cane; and
- (g) exercise such other powers as may be reasonably necessary for carrying out the purposes of the Act or of the rules made thereunder.

11. License for the construction of new factories.—(1) An application for a license to commence the construction of any building intended to be used as a factory shall be made in Form I to the Cane Commissioner, who shall forward it with his report to the Provincial Government. The Provincial Government shall publish a notice of the receipt of such application in the *Bihar Gazette* and such notice shall specify the date on or after which the application will be taken into consideration.

(2) The Provincial Government may consult the Sugar Control Board with regard to the application and the objections received thereto before disposing of the application.

N. B.—For the purpose of rule 11 any alterations to an existing building with a view to use the same as a factory shall be treated as the construction of a building intended to be used as a factory.

12. No license shall be granted for the construction of any building intended to be used as a factory unless—

- (a) The site of the proposed factory is at a distance of not less than 10 miles from any existing factory;
- (b) The quantity of cane available or likely to be available within a radius of 10 miles of the proposed site, excluding the cane in the area reserved for another factory, is not less than 60 per cent. of the estimated cane requirement of the proposed factory. The estimated cane requirement shall be calculated at 120 times the daily crushing capacity of the proposed factory;
- (c) The applicant undertakes to build storage accommodation for at least one-third of the estimated annual production of sugar at the factory. The annual production of sugar shall be calculated at 9 per cent. of the estimated cane requirement as determined under clause (b) above, and
- (d) The additional production of sugar is not likely to affect adversely the interests of the sugar industry;

Provided that a license for the construction of a building at a new site for a factory already existing in the province shall be granted if conditions (a), (b) and (c) above are fulfilled.

13. A license for the construction of any building intended to be used as a factory shall be granted in form III and shall be valid for one year and may be renewed by the Provincial Government from time to time until the construction of the factory is completed.

14. License for the extension of existing factories.—An application for a license for any extension of the plant of an existing factory, which is likely to increase its capacity for crushing cane, shall be made in form II to the Cane Commissioner who shall forward it with his report to the Provincial Government within one month of the receipt of the same.

15. No such application shall be granted unless *inter alia* the Provincial Government are satisfied, after consulting the Board, that the additional cane required by the factory is available or likely to be available within a radius of ten miles of the factory excluding the area reserved for any other factory.

16. A license for any extension of the plant of an existing factory, which is likely to increase its capacity for crushing cane, shall be granted in form IV and shall be valid for one year, and may be renewed by the Provincial Government from time to time until such extension is completed.

17. License for crushing cane.—An application for a license for crushing cane shall be submitted to the Provincial Government in form V through the Cane Commissioner on or before the 1st September immediately preceding each crushing season.

18. (1) A license granted under section 10(3) of the Act shall be in form VII and shall, among others, be subject to the following conditions:—

(a) That the factory shall be a member of the Indian Sugar Syndicate, Limited, registered under the Indian Companies Act which has been recognised by the Provincial Government under section 11 (a) of the Act; and

(b) That the minimum quantity of cane which the factory will crush during the crushing season for which license

is granted shall be 120 times its average daily crushing capacity:

Provided that condition (b) may be relaxed by the Provincial Government if they are satisfied that the inability to crush the specified quantity of cane was due to circumstances beyond the control of the occupier of the factory.

(2) The average daily crushing capacity for the purposes of clause (b) of sub-rule (1) shall be determined by the Cane Commissioner, after taking into consideration—

- (a) the total quantity of cane crushed by the factory during each of the three previous crushing seasons;
- (b) the number of days that the factory worked during each of the three previous crushing seasons; and
- (c) any extension of the plant of the factory since the last crushing season.

(3) Any person aggrieved by an order of the Cane Commissioner determining the crushing capacity of a factory under clause (b) of sub-rule (1) may within one month from the date of such order appeal to the Provincial Government.

22. Estimate of quantity of cane required by factory.—The occupier of a factory shall submit to the Cane Commissioner on or before the 1st May each year in form X an estimate of the quantity of cane which will be required by the factory during the ensuing crushing season. The Cane Commissioner after examining the estimate and consulting the Advisory Committee, within whose jurisdiction the factory is situated, shall publish the same, with such modifications as may be necessary, within one month of the receipt of the estimate, in the *Bihar Gazette*, in the office of the Collector of the district and that of the Subdivisional Officer in whose jurisdiction the factory is situated, as well as at the gate of the factory.

23. Within a month of the publication of the estimate of the cane requirements under section 14(2) of the Act, in the *Bihar Gazette*, an application for revision may be filed before the Provincial Government. Subject to the orders of the Provincial Government, the orders of the Cane Commissioner shall be final.

24. Declaration of reserved area.—(1) The Cane Commissioner may, after consulting the occupier of the factory and publishing a notice in the offices of the collectors and Sub-divisional Officers having jurisdiction over the area concerned and issuing copies thereof to the factories operating in such area, and after consulting the Advisory Committee or Committees, if any, of the area concerned and considering any objections that may be raised, issue an order under section 15(1) of the Act, declaring any area to be a reserved area for the purposes of supply of cane to a particular factory during the ensuing crushing season, if he is satisfied that—

- (a) the area so reserved is not likely to supply more than 50 per cent. of the quantity of cane required by the factory as estimated under section 14 of the Act;
- (b) the area reserved together with any area that may be assigned to the same factory under section 19 of the Act does not supply more than 65 per cent of the estimated quantity of cane required by the factory under section 14 of the Act; and
- (c) the area reserved is economically most suitable for the factory to purchase cane from.

(2) The Cane Commissioner in deciding that an area is economically most suitable for reservation for a particular factory may taken into consideration—

- (a) the distance of the factory from the area proposed to be reserved;
- (b) facilities for transport of cane to the factory from the area proposed to be reserved;
- (c) whether the area has previously supplied cane to that particular factory; and
- (d) any already existing private zoning arrangements among the factories.

(3) An order of the Cane Commissioner declaring any area to be reserved for a particular factory or altering the boundaries of an area already reserved or cancelling any previous order declaring an area to be reserved shall be published in the *Bihar Gazette*. A copy of the order shall be communicated to the factory concerned.

(4) The Provincial Government shall be the authority to which an appeal may be made against any order of the Cane Commissioner

under section 15(1) of the Act, within one month of the publication of any such order in the *Bihar Gazette*.

25. Purchase of cane in a reserved area.—A cane-grower or a Cane-growers' Co-operative Society in a reserved area may offer in form XI on or before the 1st August each year to supply during the ensuing crushing season to the occupier of the factory, for which the area is reserved, cane not exceeding the quantity produced in one-third of the area of land suitable for cane cultivation, estimating the yield at a rate not exceeding 250 maunds per acre for North Bihar and 350 maunds per acre for South Bihar or at such rate or rates as the Cane Commissioner may fix in any particular year for such reserved area :

Provided that a cane-grower of a Cane-growers' Co-operative Society may offer such cane for supply to the occupier of a factory, for which an area is reserved, in the form referred to above, on or before the* 15th February, 1939, for the crushing season 1938-39, and on or before the 30th April, 1939 for the crushing season 1939-40.

29. Declaration of assigned areas and purchase of cane therein.—(1) The Cane Commissioner may, after consulting the Advisory Committee or Committees of the area concerned and the occupier of the factory and after considering any objections that may be raised, and subject to the provision of clause (b) of sub-rule (1) of rule 24, issue an order declaring any area to be an assigned area for the purposes of the supply of cane to a particular factory and publish the same in the *Bihar Gazette*, at the office of the Collector and at the gate of the factory.

(2) The occupier or manager of a factory, for which an area has been assigned, shall under section 19(3) of the Act, on or before the 1st September, 1938 for the crushing season 1938-39 and on or before the 1st July each year for any subsequent crushing season, enter into agreements in form XIV or XIII A* or XV, as the case may be, with cane-growers, Cane-growers' Co-operative Societies or purchasing agents for the purchase in the assigned area of such quantity of cane as may be fixed by the Cane Commissioner.

(3) If such an agreement is entered into with a purchasing agent, he shall under section 19(4) of the Act, on or before the 1st October, 1938, for the crushing season 1938-39 and on or before

*An amended upto August 1939.

the 15th August each year for any subsequent crushing season, enter into similar agreements in form XVI with cane-growers or Cane-growers' Co-operative Societies in the assigned area in respect of all the cane which he has undertaken to supply to the occupier of the factory.

(4) If the cane-growers or Cane-growers' Co-operative Societies in the assigned area are not willing to enter into agreements to supply, or fail to supply, the requisite quantity of cane, the occupier or manager of the factory or the purchasing agent may, after giving a fortnight's notice to the Collector having jurisdiction over the area concerned, purchase the balance of the cane required from outside the assigned area unless otherwise directed by the Collector.

(5) After the expiry of the date fixed under sub-rule (3) or after the occupier or manager of a factory is permitted under sub-rule (4) to purchase cane from outside the area assigned to the factory, the occupier or manager of any factory other than the one for which the area is assigned, may, with the previous permission of the Cane Commissioner, enter into agreements with cane-growers, Cane-growers' Co-operative Societies or purchasing agents for the purchase in the assigned area of such cane in respect of which no previous agreement has been entered into.

30. Any person aggrieved by an order of the Cane Commissioner passed under sub-rule (1) or sub-rule (2) of rule 29 may within one month of the date of the publication of such order in the Gazette appeal to the Provincial Government.

31. Deductions from minimum price fixed.—The occupier of a factory or a purchasing agent shall not make any deductions from the amount due for cane sold to him by a cane-grower or Cane-growers' Co-operative Society, except for any advances made in cash or kind for any purpose connected with the cultivation of cane within three years prior to the date of such purchase. The deductions on account of such advances shall be subject to the following conditions:—

(a) No interest shall be charged on such advances; and

(b) such advances may be deducted in not less than three equal instalments spread over the whole crushing season.

40. Weighments, etc.—The manager or the purchasing agent, as the case may be, and all persons working under him shall comply with or cause to be complied with the following conditions:—

(1) All dealings and contracts in connection with the purchase and supply of cane shall be had and made according to the standard maund of 82-2/7 lbs. avoirdupois and multiples or sub-multiples thereof, and all weighments shall be made by means of a weighbridge and recorded correctly to the nearest quarter maund.

(2) No scales or weights shall be used, kept or possessed by or on behalf of a manager or purchasing agent which are inaccurate and which do not permit of the easy reading of the recorded weight according to the standard maund and multiples or sub-multiples thereof to the nearest quarter maund:

Provided that margin of error up to 2 per cent. may be condoned, so far as weighments are concerned.

(3) Scales which are inaccurate or which have gone out of order shall either be removed from the weighbridge premises or sealed up or rendered incapable of use for weighing cane.

(4) No scales or weights shall be used, kept or possessed by or on behalf of a manager or purchasing agent which, in addition to readings according to the standard weight, show any alternate readings unless such alternate readings are effectively effaced or blocked out to the satisfaction of the Inspector.

(5) All scales and weights used, kept or possessed by or on behalf of the manager or purchasing agent shall be open to inspection, examination and test by the Inspector at all reasonable times without notice and shall be made available for such inspection, examination or test whenever required by him. To facilitate such inspection the manager or purchasing agent shall keep two standard weights of one maund each at each weighment centre in the custody of the person in charge of weighments.

(6) (a) No cane shall be extracted from carts for any form of charity.

(b) No deductions shall be made from the net weight of cane on the ground of dryage, improper stripping or for any other reason.

(7) The weighbridge at a factory intended for taking gross weight of cane, including the weight of cart, shall not be situated at less than 50 yards from the cane carrier.

(8) Scales, weights and readings shall be kept in full view of persons supplying cane. The readings of the scale arms should be marked in Hindi on the side facing the cart to be weighed.

(9) Weighments of cane shall not be made more than half an hour after sunset unless adequate lighting arrangements are made at the weighbridge.

(10) Adequate facilities to the satisfaction of the Collector shall be provided at all weighment centres for weighments and for regulating the entry and parking of carts to avoid congestion and undue delay in the weighment of cane brought to such centres.

(11) There shall be no detention of cane carts for more than 10 hours, without adequate cause.

(12) An occupier of a factory shall provide satisfactory roads and approaches to the weighbridges as ordered by the Collector, and all such roads and approaches shall be kept in good condition during the crushing season.

(13) Sufficient parking grounds, cattle sheds and cattle troughs shall be provided at the factory gate and at other weighment centres to the satisfaction of the Collector.

(14) Any representative of growers if authorised by the Collector shall be allowed to be present at the time of weighment of cane at any weighbridge.

41. Payments.—(1) Payment for cane shall be made within a fortnight of the date of weighment:

Provided that if the person supplying cane does not appear in person to receive payment within a fortnight of the date of weighment the payment shall be made within a week of demand subsequently made by the person supplying cane.

(2) Payments may either be made by the day or the week or in any other manner according to the convenience of the manager or purchasing agent, as the case may be. The dates, the hours and the centres at which payments will be made shall, from time to time

be exhibited on a notice-board at each weighment centre throughout the cane crushing season and shall also be notified to the Inspector in whose jurisdiction the centre lies.

(3) Payments shall be made on the recorded weight of cane at the purchasing centre and no deduction shall be made by way of fine or otherwise from the calculated price by the occupier or manager of a factory or a purchasing agent, except as provided in rule 31.

(4) An occupier or manager or a purchasing agent shall be liable for all payments due for cane supplied to him or on his behalf. If a purchasing agent fails to make payments for cane purchased by him for a factory, the occupier or manager of such factory shall be responsible for making such payments.

49. Supersession of the previous rules under the Bihar Sugar Factories Control Act, 1937.—These rules shall supersede the rules published in notifications No. 34-D, dated the 4th January, 1938, and No. 220-D, dated the 27th January, 1938. All actions taken, appointments made and licenses issued under the latter rules shall be treated as issued under these rules.

Extracts of Important Rules from
U. P. Sugar Factories Control Rules, 1938

As amended upto June, 1939

are given in the succeeding pages.

Extracts of Important Rules From The United Provinces Sugar Factories Control Rules, 1938 *

(As amended up to 1st June, 1939).

1. These rules may be called the United Provinces Sugar Factories Control Rules, 1938, and shall take effect from the 8th October, 1938. These rules shall apply to the whole of the United Provinces.

3. (1) When an advisory committee is established for any area under section 3 of the Act, the Governor shall, by notification, appoint the Chairman and the Secretary thereof. The Governor may also appoint other persons, not being growers or persons interested in factories, to be members or *ex-officio* members. The Governor shall in addition, appoint as members an equal number of representatives of growers and factories, who shall ordinarily be resident of the area in respect of which the advisory committee is established.

(2) The functions of an advisory committee will be—

- (a) to recommend ways and means of maintaining healthy relations between occupiers or managers of factories, cane growers, cane growers co-operative societies and licensed purchasing agents,
- (b) to offer advice on any matter which may be referred to it for its advice by the Collector, the Commissioner, the Cane Commissioner, or the Provincial Government, especially in respect of the regulation of the purchase of cane and to advise the Cane Commissioner with regard to the cane estimates submitted to the Cane Commissioner under section 14 of the Act and the declaration of any proposed reserved or assigned areas under sections 15 and 19 of the Act;
- (c) to bring to the notice of the Collector cases of breach of any of the provisions of the Act and of the rules made thereunder and to make suggestions for the prevention of the same.

*Rules Published in the U. P. Gazette, dated 8th October, 1938.

4. (1) The Board shall consist of fifteen members.

Sugas Control
Board

(2) The Minister for the time being of the United Provinces Government in charge of Development and the Secretary for the time being to the Government of the United Provinces in the Industries Department shall be *ex-officio* members of the Board.

(3) The remaining members shall be nominated by the Provincial Government either by name or by virtue of their office and shall include an equal number of representatives of sugar factories and of cane growers.

(4) The Board shall in addition to the powers and duties conferred or imposed upon it by the provisions of the Act, advise the Provincial Government on all matters connected with the sugar industry of the province that may be referred to it by the provincial Government.

(5) The Governor shall by notification appoint one of the members of the Board as its Chairman and one as its Secretary.

(6) The meetings of the Board shall be held at Lucknow unless the Chairman otherwise directs, and on such dates as the Chairman may direct.

(7) Notice in writing of all meetings shall be circulated by the Secretary to all members not less than two weeks before the date fixed for the meeting except in urgent cases,* *in which a meeting may be held on three days notice, which should be given by letter and telegram.*

(8) The term of appointment of the Board shall be one year from the 1st July each year provided that the term of the first Board will be till 30th June, 1939.

(9) When the place of a member nominated to the Board becomes vacant by the resignation or death of such member, the Provincial Government shall nominate a new member to fill the vacancy, subject to the provisions of sub-rule 3, and such new member shall hold office for the unexpired residue of the term of office of the member in whose place he has been nominated.

(10) The procedure in Appendix II to these rules shall be followed at meetings of the Board.

*As amended up to June, 1939.

5. (1) The Members of the Board of Revenue and the Cane Commissioners shall be *ex-officio* inspectors for the whole of the province. The Divisional Commissioner, the Collector of the district and the Sub-divisional Officer shall be *ex-officio* inspectors within their jurisdictions.

(2) The Governor may appoint such servants of the Crown as he thinks fit to be additional inspectors within such local limits as he may assign to them respectively.

(3) The Provincial Government may appoint such other persons as it thinks fit to be additional inspectors for land lying within an Indian State which is occupied by a railway and over which the Government of India has full and exclusive power and jurisdiction, in respect of purchases made for factories situated in such State.

9. (1) An application for a licence to commence the construction of any building intended to be used as a factory shall be made in form 1, Appendix III, to the Cane Commissioner, who shall forward it with his report to the Provincial Government. The Provincial Government shall publish a notice of the receipt of such application, in the United Provinces Gazette and such notice shall specify the date on or after which the application will be taken into consideration.

(2) Alterations to existing buildings with a view to their use as a Factory shall amount to the construction of a building intended to be used as a factory.

(3) The Provincial Government may consult the Sugar Control Board with regard to the application and the objection received thereto before disposing of the application.

(4) No licence shall be granted for the construction of any building intended to be used as a factory unless—

(a) the site of the proposed factory is at a distance of not less than 10 miles from any existing factory or a factory for the construction of which a license has been granted.

(b) the quantity of cane available or likely to be available within a radius of 10 miles of the proposed site, excluding the cane in an area reserved for another factory, is

not less than 60 per cent of the estimated cane requirements of the proposed factory. The estimated cane requirements shall be calculated at 120 times the daily average crushing capacity of the proposed factory.

- (c) the applicant undertakes to build storage accommodation for at least one half of the estimated annual production of sugar at the factory. The annual production of sugar shall be calculated at 9 per cent of the estimated cane requirements as determined under clause (b) above, and
- (d) the additional production of sugar is not likely to affect adversely the interests of the sugar industry in the provinces of Bihar and U. P.

Provided that a licence for the construction of a building at a new site for a factory already existing in the United Provinces or in Bihar shall be granted if conditions (a), (b) and (c) above are fulfilled.

(5) A licence for the construction of any building intended to be used as a factory shall be granted in form 4 Appendix III and shall be valid for one year and may be renewed by the Provincial Government from time to time until the construction of the factory is completed.

10. (1) An application for a licence for any extension of the plant of an existing factory, which is likely to increase its capacity for crushing cane, shall be made in form 2 Appendix III, to the Cane Commissioner, who shall forward it with his report to the Provincial Government within one month of the receipt of the same.

(2) No such application shall be granted unless after consulting the Board, the Provincial Government are satisfied, *inter alia*, that the additional cane required by the factory is available or likely to be available within a radius of ten miles of the factory, excluding the area reserved for any other factory.

(3) A licence granted for any extension of the plant of an existing factory, which is likely to increase its capacity for crushing cane, shall be in form 5 appendix III and shall be valid for one year

and may be renewed by the Provincial Government from time to time until such extension is completed.

11. (1) An application for a license for crushing cane shall be submitted to the Provincial Government in form 3 Appendix III through the Cane Commissioner.

Licences for
crushing cane

(2) A licence granted under section 10(3) of the Act shall be in form 6, appendix III and shall, among others, be subject to the following conditions—

- (a) that the factory shall be a member of the Indian Sugar Syndicate, Limited, registered under the Indian Companies Act, which has been recognised by the Provincial Government under section 11 (a) of the Act, and
- (b) that the minimum quantity of cane which the factory will crush during the crushing season for which licence is granted shall be 120 times its average daily crushing capacity;

Provided that condition (b) may be relaxed by the Provincial Government if they are satisfied that the inability to crush the specified quantity of cane was due to circumstances beyond the control of the occupier of the factory.

(3) The average daily crushing capacity for the purpose of clause (b) of sub-rule (2) shall be determined by the Cane Commissioner, after taking into consideration—

- (a) the total quantity of cane crushed by the factory during each of the three previous crushing seasons,
- (b) the number of days that the factory worked during each of the three previous crushing seasons, and
- (c) any extension of the plant of the factory since the last crushing season.

(4) Any person aggrieved by an order of the Cane Commissioner determining the crushing capacity of a factory under clause (b) of sub-rule (2) may within one month from the date of such order appeal to the Provincial Government.

(5) An application for the renewal of a licence for crushing cane under section 10(4) of the Act shall be filed on or before the 1st September immediately preceding each crushing season in form 3, Appendix III, before the Cane Commissioner, who shall renew such licence in form 6. Appendix III unless the occupier of a factory has committed two breaches of the conditions of the licence for which a penalty has been imposed, in which case he shall refer the matter to the Provincial Government for orders.

Provided that the Cane Commissioner may renew a license for which an application for renewal is received by him after the 1st September if he is satisfied that there was reasonable cause for the delay.

12. (1) The occupier of a factory shall submit to the Cane Commissioner on or before 1st May each year in form 8, Appendix III an estimate of the quantity of cane which will be required by the factory during the crushing season next following the ensuing crushing season; provided that the estimate for the 1939-40 season shall be submitted by the 15th October, 1938.

(2) The Cane Commissioner shall after consulting the Advisory Committee, if any, publish the same with such modifications as may be necessary within a month of the receipt of the estimate in the United Provinces Gazette and in the office of the Collector of the district in which the factory is situated.

(3) The Provincial Government may on its motion or on an application for revision field within a month of the publication of the estimate revise it.

13. (1) In declaring reserved areas under section 15(1) of the Act, the Cane Commissioner may take into consideration (a) the distance of the factory from the area proposed to be reserved, (b) facilities for transport to the factory from the area proposed to be reserved, (c) whether the area has previously supplied cane to the said factory, (d) previously existing zoning arrangements among the factories, and (e) the estimated quantity of cane required by the factory.

(2) An order of the Cane Commissioner declaring any area to be reserved for any particular factory or altering the boundaries of an area already reserved or cancelling any previous order declaring

an area to be reserved shall be communicated to the Occupier of the factory concerned and shall be published at the office of the Collector of the district in which the area is situated and at the gate of the factory.

(3) An appeal against any order of the Cane Commissioner under section 15(1) of the Act may be made to the Provincial Government within one month of the publication of such order at the office of the Collector.

14. (1) When an area has been reserved, the Cane Commissioner may cause a survey of the sugarcane in it to be made in form 9, Appendix III and may deliver it to the Manager or Occupier of the factory concerned.

(2) The cost of the survey may be assessed at one rupee for every 25 acres of sugarcane surveyed and shall be payable within a month of the delivery of the form referred to in sub-rule (1).

15. (1) The occupier or Manager of a factory may estimate or cause to be estimated by September 30th the quantity of sugarcane with each grower enrolled in the Growers' Register and shall submit the estimates to the Collector. The Collector may, after such enquiries as he considers necessary, modify the estimates and cause them to be published in such manner as he may direct. In framing these estimates, sugarcane grown on more than one-third of the area of land suitable for sugarcane cultivation in the holding of each grower may be excluded.

(2) A cane grower or a cane growers' Co-operative Society in a reserved area may offer in form 10, Appendix III by the 15th October each year to supply during the crushing season to the occupier or manager of the factory for which the area has been reserved, cane not exceeding, in the case of a cane grower, the quantity estimated in accordance with sub-rule (1), **provided that such offers may, in respect of the crushing season 1938-39, be made by the 7th November, 1938.*

(3) The occupier or manager of the factory for which the area is reserved shall enter into an agreement with the cane grower or the cane growers' Co-operative Society as the case may be, in form 15 and 12 respectively or in any other form approved by the Cane Commissioner within a month of the offer mentioned in sub-rule (2).

**As amended up to June, 1939.*

(4) The manager or occupier of the factory shall spread the purchases made in the reserved area in an equitable manner and shall in the case of cane growers of the reserved area make purchases of cane only after issuing requisition slips.

In order to comply with this rule the manager or occupier shall cause identification cards to be distributed to all cane growers of the reserved area and shall maintain a record of the same. He will also keep a record of the requisition slips issued and distributed to the growers and returned by them.

(5) Cane grown in a reserved area shall not except with the permission of the Cane Commissioner be purchased by any person without the previous issue at convenient centres in the reserved area, of requisition slips, and identification cards to the growers by the occupier or manager of the factory for which the area is reserved.

(6) Requisition slips and identification cards to members of a cane growers' Co-operative Society shall not be issued except by such Society.

(7) In case of a dispute whether a particular system adopted for the purchase of cane grown in the reserved area is equitable or not, the dispute may be referred to the Cane Commissioner whose decision shall be final.

16. (1) An order of the Cane Commissioner declaring an area
Declaration of an assigned area and purchases of cane in an assigned area to be assigned for a factory or prescribing the quantities of cane to be purchased by its occupier in the assigned area, or modifying or cancelling any such previous orders shall be communicated to the occupier of the factory and shall be published at the office of the Collector of the district in which the area is situated and at such centres in the assigned area as the Collector or the Cane Commissioner may direct.

(2) An appeal against an order of the Cane Commissioner under section 19(1) or (2) of the Act may be made to the Provincial Government within one month of the publication of such order at the office of the Collector.

(3) The occupier of a factory for which an area has been assigned shall under section 19(3) of the Act by the 1st November,

1938 for the crushing season 1938-39 and by the 15th October each year for any subsequent crushing season enter into agreements in form 15, Appendix III or form 12, Appendix III or form 13, Appendix III as the case may be, with cane growers, cane growers' Co-operative Societies or purchasing agents for the purchase in the assigned area of such quantity of cane as may be fixed by the Cane Commissioner.

(4) If such an agreement is entered into with a purchasing agent, the latter shall under section 19(4) of the Act enter into similar agreements in form 14, Appendix III with cane growers or cane growers' Co-operative Societies in the assigned area in respect of all the cane which he has undertaken to supply to the occupier of the factory.

(5) Purchases of cane from growers in the assigned area shall be spread in an equitable manner and shall be made only after the issue of requisition slips. The purchaser shall cause identification cards to be distributed to the cane growers of the assigned area who have entered into the agreement referred to in sub-rules 15(3) and (4) and he will also keep a record of the requisition slips issued and distributed to them and returned by them.

(6) In case of dispute whether a particular system of purchase adopted by the occupier or manager of a factory or his employee or the purchasing agents in the assigned area is equitable or not, the dispute may be referred to the Cane Commissioner whose decision shall be final.

18. (1) An occupier or a manager or a purchasing agent or any person employed by him shall not purchase cane Minimum prices for a factory or pay for it at a price below the minimum price fixed under these rules in accordance with section 21 of the Act.

(2) The minimum price payable for cane shall be fixed per standard maund of 82-2/7 lbs. avoirdupois.

19. (1) All transactions in connexion with the purchase and supply of cane shall be made according to the maund Weighments of 82-2/7 lbs. avoirdupois and it shall not be lawful to use any other weight in relation to any such transaction.

(2) No cane shall be purchased without actual weighment.

(3) All weighments of cane shall be made by the maund of 82-2|7 lbs. avoirdupois and multiples thereof.

(4) The net weight of cane shall be correctly recorded to the nearest eighth of a maund.

(5) The occupier or manager of a factory or a purchasing agent shall permit a representative of a cane growers' Co-operative Society or any other person duly authorised by the Cane Commissioner for the purpose to watch or check weighments and to examine the parchas in which weights are recorded.

Note.—The person so authorised by the Cane Commissioner shall ordinarily be of the qualifications and status not lower than those of a Naib Tahsildar.

(6) No scales or weights shall be used, kept or possessed for the weighment of cane by, or on behalf of, an occupier or manager or a purchasing agent—

- (i) which are incorrect, provided that a weighbridge shall not be deemed to be incorrect which weighs correct to within two per cent. of the correct weight of the consignment actually being weighed, and cannot be adjusted more accurately, or
- (ii) the scale arms of which are not clearly marked on both sides wherever possible and are either not accessible to the vendors of cane and their authorised agents or not legible to persons standing near the carts which are being weighed, or
- (iii) which have been disapproved by an Inspector: provided that the Inspector shall not disapprove any scales or weights which comply with the rules unless if after due warning a weighbridge is not adjusted and is persistently found to be incorrect.

(7) All weights used, kept or possessed for the purchase of cane shall be made of iron, brass or other suitable metal and be clearly stamped or marked to indicate the denomination.

(8) That part of the mechanism of a weighbridge by which its adjustment is controlled shall, wherever possible, be kept suitably sealed or locked.

(9) All scales and weights used, kept or possessed for the purchase of cane shall be open to inspection, examination and test by an Inspector at all times without notice and shall be made available for such inspection, examination and test when required by the Inspector. To facilitate such inspection, standard weights of ten maunds in the aggregate shall be kept by the occupier or manager or the purchasing agent concerned as the case may be, at every purchasing centre where there is a weighbridge, for testing the same.

(10) An occupier or manager or purchasing agent shall cause all weighbridges or scales used, kept or possessed by him for the purchase of cane to be tested at least twice a week and maintain a record of such tests which shall on demand be shown to the Inspector.

(11) At every purchasing centre adequate facilities for weighment, to the satisfaction of the Cane Commissioner, shall be provided by the occupier or manager to avoid congestion and undue delay in the weighment of cane, and carts shall not be kept waiting unduly for weighment.

Explanation.—A cart shall not be deemed to have been kept waiting unduly if the supplier of cane, having received instruction in writing to deliver cane on a certain day, ignores those instructions or where the practice of issuing written instructions is in force, brings cane without receiving such instructions.

(12) An occupier or manager shall—

- (i) provide metalled approaches to and exits from all weighbridges at the factory premises to such distance as may be in each case reasonable and feasible, up to a distance of one furlong, when required to do so by the Cane Commissioner,
- (ii) keep the same in a proper state of repair,
- (iii) provide reasonable space for parking of carts waiting their turn for approach to the weighbridges, and
- (iv) provide sheds and cattle troughs at the factory gates to the satisfaction of the Cane Commissioner.

(13) Weighments of the cane for a factory shall not be made more than half an hour after sunset, unless lighting arrangements

approved by the Inspector as sufficient for the easy reading of the scale arms by both the purchaser and the vendor or his authorised agent are made and maintained.

(14) No deduction shall be made from the weight of cane on the ground that the cane is improperly stripped or on any other ground whatever, provided that where cane is brought bound in bundles and weighed in bundles a deduction not exceeding 1 seer for every 4 maunds of cane may be made on account of the weight of the binding material.

20. (1) The occupier or manager of a factory shall provide
 Payments adequate facilities to the satisfaction of the Collector
 for payment of the price of cane.

(2) The occupier or manager or purchasing agent shall make all payments for cane at the purchasing centre within 24 hours of demand.

Provided that in the case of purchases made at such purchasing centres (other than the factory premises) as may be approved by the Collector of the district in which the purchasing centre is situated, payments shall be made within seven days of demand.

Provided further that when a purchasing centre is closed, all payments must be made at the centre within a week of the closing of the centre and if any growers do not appear to receive payment within this period, payments to them should thereafter be made at the factory gate within 24 hours of demand.

(3) Payments shall be made on the basis of the recorded weight of the cane at the purchasing centre.

(4) Payments for cane purchased for a factory shall not be made to a representative of the grower (or to a representative of the person representing himself to be such grower) unless he is duly authorised by him in writing to receive such payment.

Provided that no person who has purchased the cane from the grower or who is employed by an occupier or manager or a purchasing agent and no person who has lent money to the grower and no agent of such person shall take such payment.

(5) An occupier or manager and purchasing agent shall be liable for all payments due for cane supplied to him or on his behalf. If a purchasing agent fails to make payments for cane purchased by him for a factory, the occupier of such factory shall be responsible for making such payments.

Provided that notice or complaint of non-payment is given or made in writing to the occupier or manager of the factory concerned within six months of the date on which the purchasing centre at which the cane was supplied is closed.

(6) Except as provided in sub-rules (7), (8), (9) and (10) no deduction shall be made by way of fine or otherwise from the price of the cane purchased which would reduce such price to a figure below that calculated at the prescribed minimum rate:

Recoveries of the dues of a cane growers co-operative society may be made by deduction from the price payable for cane.

(7) If an occupier or manager provides his own means of transport (including a tramway) a deduction for the cost of such transport may be made at a rate not exceeding one pie per mile per maund, subject to a maximum of one anna per maund, from the price of cane purchased at a purchasing centre.*

Provided that the Collector of the district in which the purchasing centre is situated approves of the proposed means of transport and declares the purchasing centre to be one to which this proviso applies and such purchasing centre must be situated at a distance of—

- (a) not less than 5 miles from the factory, in case transport by rail by direct route is not possible,
- (b) more than 5 miles from the nearest railway station, in case through transport by road is not possible and the cane has to be transported partly by road and partly by rail, or
- (c) more than 5 miles from the nearest railway station and more than 10 miles from the factory, in case through transport by road as well as transport partly by rail by direct route and partly by road is possible.

Note.—The supplier of cane shall have the option of delivering the cane using his own means of transport and in such case he shall

*Such a provision is not found in the Bihar Sugar Factories Control Rules.

be entitled to receive payment of the full price payable, without deduction.

(8) Such deduction* as the Provincial Government may by notification direct may be made from the price of cane purchased at a purchasing centre situated in any tract declared by the Provincial Government as a tract—

- (i) in which cane is definitely below the average of standard cane for the area on account of natural causes *e.g.*, serious water-logging, intensive insect attack, disease or severe frost, or
- (ii) in which a specified inferior variety of cane is ordinarily or preponderatingly grown, or
- (iii) in which owing to inaccessibility, or other special causes, the circumstances are such that a deduction from the minimum price would be in the interest of the growers.

(9) The Provincial Government, if satisfied that in any local area a substantial quantity of cane will remain standing and unsold on the 1st May and is not likely to be purchased at the prescribed minimum price, may by notification in the Gazette direct that in such area such deduction as may be specified in the notification may be made from the price of the cane purchased after that date.

*There is no provision for deduction of cane-prices, owing to cane being of inferior quality, in the Bihar Sugar Factories Control Rules.

30. All matters connected with the interpretation of these rules shall be referred to the Cane Commissioner whose decision shall be final.

31. These rules shall supersede the rules framed under the Sugarcane Act, 1934, and previous rules framed under Act I of 1938.

Repeal of old rules

The Text of the U. P.

Power Alcohol Act, 1939.

as passed by the U. P. Legislatures
is given in the succeeding pages.

THE UNITED PROVINCES POWER ALCOHOL ACT, 1939.*

GOVERNMENT OF THE UNITED PROVINCES

AN
ACT

*To provide for the fostering, development and regulation
of the industry of power alcohol.*

WHEREAS in pursuance of the policy of industrial development
of the United Provinces, it is expedient
Preamble. to provide for the fostering, develop-
ment and regulation of the industry of power alcohol;

It is hereby enacted as follows :

CHAPTER I.

PRELIMINARY.

1. (1) This Act may be called the United Provinces Power
Short title, extent Alcohol Act, 1939.
and commencement.

(2) It extends to the whole of the United Provinces except the
Jaunsar-Bawar Pargana of the Dehra Dun district and the portion
of the Mirzapur district south of Kaimur Range to which areas or
to any specified part thereof the Governor may, by notification in
the official Gazette, apply the Act subject to such exceptions and
modifications as he thinks fit.

(3) It shall come into force on such date as the Governor may,
by notification in the official Gazette, appoint.

*Passed by both the Houses in October, 1939.

2. In this Act, unless there is anything repugnant in the Definitions. subject or context,—

(a) "molasses" means the final residual by-product obtained in the manufacture of sugar
"Molasses" at a factory as defined in
clause (j) of section 2 of the United Provinces Sugar
Factories Control Act, 1938;

(b) "petrol" means dangerous petroleum as defined in clause (b) of section 2 of the
"Petrol" Petroleum Act, 1934;

(c) "petroleum" has the meaning assigned to it in clause (i) of section 2 of the Petro-
"Petroleum" leum Act, 1934;

(d) "power alcohol" means ethyl alcohol containing not less than 99·5 per cent. by
"Power alcohol" volume of ethanol measur-
ed at sixty degrees Fahrenheit corresponding to 74·4
over proof strength;

(e) "prescribed" means prescribed by this Act or rules made
"Prescribed" thereunder;

(f) "sale" and "sell" include exchange, barter and offering
"Sale" and "Sell" and exposing for sale.

CHAPTER II.

PRODUCTION, MIXING AND DISTRIBUTION.

3. (1) Save as otherwise provided by or under this Act, no
Compulsory admixture petrol shall be sold except with an
of alcohol with petrol. admixture in the prescribed manner
of power alcohol supplied by the Provincial Government.

(2) The Provincial Government may, by notification in the
official Gazette and publication in such other manner as it may

deem fit, prohibit, subject to rules made in this behalf, the sale of any petroleum except with an admixture in the prescribed manner of power alcohol supplied by the Provincial Government.

(3) The proportion of petrol and power alcohol or petroleum and power alcohol in such mixture shall be such as may be notified by the Provincial Government from time to time and different proportions may be notified for different areas or for mixtures destined for different purposes; but such proportion of power alcohol with petrol in the case of mixture destined for affording motive power for any motor vehicle shall not be more than thirty per cent.* or less than five per cent. by volume.

4. (1) Save as otherwise provided by or under this Act no person shall use petrol for providing motive power for any motor vehicle without admixture with power alcohol in the prescribed manner and proportion.

Use of petrol without admixture with alcohol for motive power prohibited.

(2) Notwithstanding anything contained in sub-section (1), petrol without admixture of power alcohol bought at any place outside the United Provinces and contained in any fuel tank incorporated in any motor vehicle or attached to the internal combustion engine may be used for providing motive power for such vehicle.

5. No person shall manufacture power alcohol from any substance other than molasses or such other substance as may be notified by the Provincial Government.

Production of alcohol only from molasses.

6. Every licence granted under the provisions of the United Provinces Excise Act, 1910, for the manufacture of power alcohol shall, besides containing the particulars that may be necessary under the provisions of that Act or this Act, provide for :—

Certain conditions of licence.

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(a) the price at which power alcohol shall be sold by the manufacturer to the Provincial Government; and

(b) the maximum and the minimum quantities of power alcohol which shall be manufactured by the licensee and the spread over of such production during the

*Amended by the U. P. Legislative Council in September, 1930, to thirty per cent. instead of twenty five per cent.

period of licence, subject to the power of the Excise Commissioner to alter such quantity in accordance with the rules made in this behalf.

7. Every manufacturer of power alcohol destined for admixture with petrol or petroleum or for sale to provide motive power for any form of motor vehicle shall add to it denaturant of such specification and in such proportion as may be prescribed, and different denaturants may be prescribed for power alcohol meant for different aforesaid purposes.

8. All power alcohol destined for admixture with petrol or petroleum or for sale to provide motive power for any form of motor vehicle manufactured in the United Provinces shall be sold to the United Provinces Government and to no other person.

9. No person shall sell, or keep for sale, any power alcohol for the purpose of its being used to provide motive power for any form of motor vehicle, except under the authority and subject to the terms and conditions of a licence granted in that behalf by the Collector.

10. (1) Notwithstanding section 3, the Provincial Government may authorize any officer, not below the rank of Collector, to grant a licence to any person to sell petrol without the admixture of power alcohol, for use in aeroplanes or for such other purpose other than that of affording motive power for any motor vehicle as may be notified by the Provincial Government.

(2) Such licence shall be in such form and subject to such terms and conditions as may be prescribed.

11. No person shall carry on the operation of mixing power alcohol with petrol or petroleum except under the authority and subject to the terms and conditions of a licence granted in that behalf by the prescribed authority.

CHAPTER III.

ADMINISTRATION, PENALTY AND SUPPLEMENTAL
PROVISIONS.

12. The Excise Commissioner appointed by the Provincial Government under clause (a) of sub-section (2) of section 10 of the United Provinces Excise Act, 1910, shall be the chief controlling authority under this Act and shall have such powers as may be prescribed.

U. P. I' of 1910.

13. (1) The Provincial Government may, by notification in the official Gazette, authorize any officer by name or by virtue of office to enter and search any place where he has reason to believe that any petrol or petroleum is being mixed with power alcohol, or any mixture of petrol or petroleum with power alcohol is being sold, otherwise than in accordance with the provisions of this Act and the rules made thereunder, and to seize, detain or remove any or all of the petrol, petroleum or mixture in respect of which in his opinion an offence under this Act has been committed.

Entry and search.

(2) The provisions of the Code of Criminal Procedure, 1898, relating to searches shall, so far as they are applicable, apply to searches by officers under this Act.

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14. The Provincial Government may authorize any officer by name or by virtue of his office to enter and inspect, at any time by day or by night, any place where a licensed person carries on the operation of mixing petrol or petroleum with power alcohol, or where the mixture of petrol or petroleum with power alcohol is sold by any licensed person and to examine, test, measure or weigh any materials, vats, utensils, implements, apparatus, power alcohol, petrol, petroleum or mixture of petrol or petroleum with power alcohol found in such place, and to see if the conditions of licence are being observed. Such officer may seize any measures, weights or testing instruments which he has reason to believe to be false and take samples of power alcohol, petrol or petroleum, or mixture of petrol or petroleum with power alcohol for testing.

Inspection and sampling, etc.

15. (1) Whoever contravenes any of the provision of sections
Penalty for offence 3, 7, 8, 9 and 11 shall be punishable
against sections 3, 7, 8, 9 and 11. with fine which may extend to five
hundred rupees.

(2) If any person, having been convicted of any offence punishable under sub-section (1), is again guilty of any offence punishable under that sub-section, he shall be punishable for every such subsequent offence with fine which may extend to two thousand rupees.

16. Whoever contravenes the provisions of section 4 shall be
Penalty for offence punishable with fine which may extend
against section 4. to one hundred rupees.

17. Offences punishable by or under this Act shall be triable
by a Magistrate of the first class, or by
Jurisdiction. a Magistrate of the second class specially
empowered in this behalf by the Provincial Government.

18. (1) In any case in which an offence under section 15 has
Confiscation. been committed, the convicting magis-
trate may direct that the power alcohol,
petrol, petroleum denaturant, or mixture of petrol or petroleum with
power alcohol in respect of which the offence has been committed
shall, together with the receptacles in which it is contained, be
confiscated.

(2) This power may also be exercised by any court in the
exercise of its appellate or revisional jurisdiction.

19. All offences punishable under this Act shall be bailable
V of 1898 within the meaning of the Code of
Offences to be bailable. Criminal Procedure, 1898, and the pro-
visions of that Code in respect of bail shall be applicable thereto.

20. The provisions of section 49 of the United Provinces
U. P. IV of 1910 Excise Act, 1910, shall apply to the
Application of sections offences punishable under this Act, and
40 and 58 of the U. P. those of section 58 of that Act to any
Act IV of 1910. article seized under this Act.

21. No suit, prosecution or other legal proceeding shall be instituted against the Crown or any person for anything which is in good faith done or intended to be done under this Act or the rules made thereunder.

22. Any dues recoverable by the Provincial Government under this Act shall be recoverable in the manner provided for the recovery of excise revenue in section 39 of the United Provinces Excise Act, 1910, U. P. Act
IV of 1910

23. (1) The Provincial Government may, by notification in the official Gazette, and subject to the condition of previous publication, make rules to carry out the purposes of this Act.

(2) In particular, and without prejudice to the generality of the foregoing power, such rules may—

(a) prescribe specifications and tests in respect of the purity of power alcohol intended for admixture with petrol in order to ensure its suitability for use in motor vehicles;

(b) regulate the purchase of power alcohol under section 7 by the Provincial Government and the fixation of price for the same;

(c) regulate the sale of power alcohol by the Provincial Government for mixing with petrol or petroleum or for providing motive power for any form of motor vehicle and the fixation of price for the same;

(d) prescribe conditions in respect of the transport and storage of power alcohol intended for admixture with petrol and for the manner in which the admixture is to be effected;

(e) provide for the conditions under which, and the form in which and the period for which, licences under this Act may be granted and the circumstances in which such licences may be suspended, cancelled or refused renewal;

- (f) provide for the specification of petrol, petroleum and denaturants which may be mixed with power alcohol;
- (g) prescribe methods of denaturation of power alcohol destined for admixture with petrol or petroleum or for providing motive power for any form of motor vehicle;
- (h) provide for testing and certification of denaturants, power alcohol and mixture of petrol or petroleum with power alcohol, the establishment of a laboratory or laboratories for testing power alcohol, denaturant or such mixture and the fees that may be charged for the same;
- (i) provide for the orders, other than orders passed in any judicial proceeding, passed under this Act from which, the authority to which and the period within which, an appeal or revision shall lie and the powers of such authority with respect to such appeals and revisions;
- (j) prescribe the particulars and the forms of returns to be submitted, and records and books to be maintained by licence holders under this Act, the manner in which they are to be verified and the time when and the authority to whom returns are to be submitted;
- (k) prescribe the powers and duties to be exercised or performed by officers of the Excise Department and of any other department authorized in this behalf while acting under this Act;
- (l) regulate the price within which the mixture of petrol and power alcohol shall be sold;
- (m) provide for the disposal of any article which has been seized or confiscated under this Act;
- (n) regulate the taking of samples and provide for the cases in which payments shall be made for the value of samples taken and the mode of such payments;

(o) provide for the procedure to be adopted when there is a difference of opinion as regards the quality of alcohol, petrol, petroleum, denaturant or mixture of petrol or petroleum with power alcohol between an officer of the Excise Department or of any other department authorized in this behalf and the manufacturer of power alcohol for admixture with petrol or petroleum or for providing motive power for any form of motor vehicle, or any licence holder under this Act;

(p) prescribe for measures, weights and instruments that shall be maintained by the licence holders at places where the operation of mixing petrol or petroleum with power alcohol is carried on, the procedure to be observed in testing them and the certificate that may be granted when they are found to be correct;

(q) provide for the giving of information when an accident by explosion or fire attended with loss of human life or serious injury to person or property occurs as a result of the ignition of power alcohol or mixture of petrol and power alcohol; and

(r) provide for any other matter expressly required or allowed by this Act to be prescribed.

(3) In making any rule, the Provincial Government may direct that a breach thereof shall be punishable with fine which may extend to five hundred rupees and where the breach is a continuing one with further fine which may extend to one hundred rupees for every day after the first day during which the breach has been persisted in.

24. Nothing in this Act shall affect the provisions of the United Provinces Excise Act, 1910, so far as they apply to power alcohol unless there are provisions to the contrary in this Act or the rules made thereunder.

Saving.

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STATEMENT OF OBJECTS AND REASONS,
APPENDED TO THE BILL.

THE problem of the utilization of molasses especially for the manufacture of power alcohol has been engaging the attention of the Government and public for some years. A consideration of the Report of the Joint Power Alcohol and Molasses Inquiry Committee shows that the manufacture of power alcohol is a sound economic proposition. The most important use of power alcohol is as motor fuel mixed with petrol. Accordingly it is proposed to introduce legislation to control the production, supply and distribution of power alcohol and to make its admixture with petrol in specified proportions for use as motor fuel compulsory.

K. N. KATJU,

Minister of Development and Justice.

By order,

N. C. MEHTA,

Secretary to Government,

United Provinces.

LUCKNOW, 11th September 1939.

STATISTICAL TABLES

IN

“The Sugar Industry at a Glance,” (1939)

(Revised up to 30th November, 1939)

TABLE NO. I

TABLE NO. II

*Number of Cane factories working in India, including States, and
Production of Sugar from Cane Factories, Gur Refineries,
Khandsari; Net Import of Sugar in British India and
Import in Kathiawar Ports during the last
8 years, and estimates for 1939-40*

Year (November October)	No. of cane factories working in India	Cane Factory Production (November- October)	Sugar Refined from Gur (Janu- ary-December)*	Khandsari (Con- jectural estimates) (Nov.-Oct.)	Total Production of sugar in India (Nov.-Oct.)	Net Import (Excluding Re- exports) of Sugar in British-India (Nov.-Oct.)	Import of Sugar in Kathiawar Ports (Nov.-Oct.)
		(Tons)	(Tons)	(Tons)	(Tons)	(Tons)	(Tons)
1931-32	32	158,581	69,539	250,000	478,120	438,797	92,678
1932-33	57	290,177	80,106	275,000	645,383	321,081	68,649
1933-34	112	453,965	61,094	200,000	715,059	233,366	87,094
1934-35	130	578,115	39,103	150,000	767,218	197,775	113,364
1935-36	137	932,100	50,067	125,000	1,107,167	86,962	45,218
1936-37†	137	1,111,400	19,500	100,000	1,230,900	11,960 ‡	12,870
1937-38	136	930,700	16,600	125,000	1,072,300	9,410	12,284
1938-39*	139	650,800	15,600	100,000	7,66,400	254,430	68,672
1939-40**	144	850,000	12,000	100,000	9,62,000	75,000	(11 Months) 15,000

* Figures of gur production for calendar year 1932 are added to figures for 1931-32, and so on.

** Our estimates.

† Factories in Burma, and production of sugar in Burma, are excluded from 1936-37 season.

‡ Imports in Burma excluded from April, 1937 onwards.

TABLE NO. 2

Comparative growth of the Sugar Industry in the various Provinces since 1931-32

Province	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	1939-40 (Est.)
(No. of cane-factories working)									
U. P.	14	33	59	65	67	68	68	69	72
Bihar	12	19	33	34	35	33	33	32	33
Punjab & Sind	1	1	5	6	4	5	3	3	3
Madras	2	2	4	8	8	11	8	7	7
Bombay	2	1	4	5	6	6	7	7	7
Bengal	2	5	6	6	6	8	9
Orissa	2	2	2
Indian States	4	5	9	8	9	11	12
Burma *	1	1	1	2	2	3	2	2	2
Total for India	32	57	112	130	137	137	136	139	144

*Burma Excluded from 1936-37 onwards from the total for India.

TABLE NO. 3

*No. of sugar factories in various Provinces, working in 1938-39,
Estimated quantity of cane crushed, sugar produced and
Recovery percentage obtained etc.*

(Official Estimates of the Director, Imperial Institute of Sugar Technology, Cawnpore, published on 7th September, 1939)

Province	No. of Mills Working	Cane Crushed Tons	Sugar Made	Recovery Sugar per cent cane 1938-39	Recovery Sugar per cent cane 1937-38
United Provinces	69	3,505,400	320,300	9.14	9.18
Bihar	32	1,795,300	161,600	9.00	9.58
Punjab & Sind	3	87,100	7,500	8.62	8.40
Madras	7	245,500	23,000	9.37	9.47
Bombay	7	463,200	52,300	11.29	10.97
Bengal	8	131,100	9,900	7.55	8.89
Orissa	2	8,900	700	7.87	8.17
Indian States	11	768,300	75,500	9.83	9.81
Total (India)	139	7,004,800	650,800	9.29	9.38
Burma	2	220,100	21,800	9.90	9.37

TABLE NO. 4
Sources of supply of Sugar required for Consumption in India.
(November-October) from 1930-31 to 1938-39.

PARTICULARS	1930/31	1931/32	1932/33	1933/34	1934/35	1935/36	1936/37	1937/38	1938/39
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Initial Stock :									(our Est)
(1) In Ports	37,100	31,510	19,176	9,057	21,630	11,189	23,684	22,000	20,000
(2) In principal Land markets	8,366	7,994	5,330	15,000	15,000
(3) With factories	4,000	130,300	170,000	67,000
Production of Sugar :									
(a) Direct from cane	119,859	158,581	290,177	453,965	578,115	932,100	1,111,400	930,700	650,800
(b) Refined from Gur	29,700	61,990	77,995	64,890	43,500	47,876	25,600	37,200	12,200
(c) Khandasari	200,000	250,000	275,000	200,000	150,000	125,000	100,000	125,000	...
(d) Imports of Sugar by Sea	697,621	443,200	324,400	245,300	200,100	93,800	16,001	8,986	254,400
Imports of Sugar by Sea into Kathiawar Ports	114,758	98,000	64,000	87,094	113,400	47,200	12,870	12,238	90,600
TOTAL SUPPLY	1,199,038	1,038,281	1,050,748	1,060,306	1,115,111	1,263,159	1,424,865	1,301,124	11,10,000
Re-Export of sugar by Sea	3,691	4,414	587	11,900	2,157	6,206	5,533	131	2,000
Export of sugar by Sea	268	382	3,356	434	357	449	10,640	8,668	7,000
Export of sugar by Land	36,876	32,000	31,957	30,607	29,939	27,667	35,064	31,100	30,000
Closing Stock :									
(1) in ports	37,640	19,176	9,057	21,630	11,189	23,684	22,000	20,000	80,000
(2) in principal inland markets	7,994	5,330	15,000	15,000	25,000
(3) with factories	4,000	130,000	170,000	67,100	...
Total to be deducted	78,435	55,972	44,957	64,571	51,636	193,336	258,237	141,899	144,000
Quantity consumed to the nearest thousand	1,121,000	982,000	1,006,000	996,000	1,059,000	1,074,000	1,167,000	1,159,000	9,66,000
									(Our Estimate)

* *Vide* The Review of the Sugar Trade of India, for the year 1937-38, published with the Indian Trade Journal, dated 2nd November, 1939. For statistics of production, imports etc. for 1938-39 see previous tables.

TABLE NO. 5

*Total, and per capita Consumption of Sugar, and Gur in India.**

Year (Nov- Oct)	Consumption of sugar in tons.	Official Estimate	Consumption of Gur in tons.	Per capita Consumption in lbs.		
				Sugar	Gur	Total of Sugar & Gur
				lbs per head	lbs per head	lbs per head
1931-32	982,000	"	2,758,000	6.2	17.2	23.4
1932-33	1,006,000	"	3,240,000	5.8	20.2	26.0
1933-34	996,000	"	3,486,000	5.8	21.6	27.4
1934-35	1,059,000	"	3,701,000	6.5	22.7	28.9
1935-36	1,074,000	"	4,101,000	6.5	26.7	33.2
1936-37	1,167,000	"	4,268,000	7.3	" 24.9	34.2
1937-38	1,159,000	"	3,364,000	7.1	" 21.0	28.1
1938-39	966,000	Our est.	3,200,000	5.7 (Our est.)	20.2	25.9

*Vide the Review of the Sugar Trade of India, for the year 1937-38, published with the Indian Trade Journal dated 2nd November, 1939. The total value of the sugar, including *gur*, produced in 1937-38 may be estimated at Rs. 600,000,000.

TABLE NO. 6

Per Capita Consumption of Sugar in other Countries in 1936-37.

Great Britain†	110.9 lbs. per head
U. S. A.†	102.4 " "
Netherlands	55.8 " "
France	54.8 " "
Australia	117.4 " "
Germany‡	59.7 " "
Cuba‡	88.0 " "
Java‡	11.2 " "
Japan	25.8 " "

†Great Britain and U.S.A. import to meet their requirements.

‡Germany, Cuba, and Java have surplus for export.

TABLE NO. 7

*Yearly World Production, Consumption, and the Carry-over of stocks of Sugar for the last 8 years in thousand tons (Raw Sugar Value)**

Crop year (Sept. 1st to Augt. 31st)	Opening Stocks (Sept. 1st)	Production	Consump- tion	Closing Stocks (August 31st)	Percentage relation of stocks to Consumption
1931-32	12,362	26,431	26,724	12,069	45.2
1932-33	12,069	24,692	26,193	10,568	40.3
1933-34	10,568	25,709	26,287	9,990	38.0
1934-35	9,990	26,191	27,188	8,993	33.1
1935-36	8,993	28,846	29,231	8,608	29.5
1936-37	8,608	30,818	30,549	8,877	29.1
1937-38	8,877	30,967	29,647	10,197	34.4
1938-39	10,197	29,642	29,323	10,516	35.9

*Figures are in long tons (Long ton=2,240 lbs.) (Metric ton=2,205 lbs.), and (short ton=2,000 lbs.)

Vide Lamborn's Sugar Statistical Bulletin, dated New York, 25th February, 1939.

A glance at the last Table in the 1939 Annual will show that India leads as the largest sugar producing country in the world, since 1931.

TABLE NO. 8

*Average and Maximum Percentage of Recovery of Sugar in Factories in India, and Java, since 1931-32.**

	India	U. P.	Bihar	Bombay	Java	India
Year	Average	Average	Average	Average	Average	Maximum
1931-32	8.89	8.59	9.06	10.46	10
1932-33	8.66	8.55	8.60	10.00	11.15	10
1933-34	8.80	9.08	8.32	10.00	12.64	10
1934-35	8.66	8.56	8.79	10.37	12.35	11.10
1935-36	9.29	9.60	8.93	10.47	13.21	11.34
1936-37	9.50	9.65	9.20	10.68	11.72	11.43
1937-38	9.38	9.18	9.58	10.97	11.40	11.63
1938-39	9.29	9.14	9.00	11.29	12.25

**Vide* Trade Journal, Calcutta, 7th September, 1939.

TABLE NO. 9

*Capacity of Factories and Duration of Crushing Season in India.**

	Tons	
Average Cane-crushing capacity of Factories (calculated on the basis of tons of cane crushed per day of actual working) in India	517	1934-35
	568	1935-36
	630	1936-37
	660	1937-38
	630	1938-39
<i>Maximum</i> cane-crushing capacity of Factories per day in India	2,012	1934-35
	1,807	1935-36
	1,960	1936-37
	2,000 (in U.P.)	1937-38
	1,850 (in U.P.)	1938-39

Duration of Cane-Crushing Season (Oct.-May)	1932-33 No. of days	1933-34 No. of days	1934-35 No. of days	1935-36 No. of days	1936-37 No. of days	1937-38 No. of days	1938-39 No. of days
<i>Mean</i> duration of Cane-crushing season in <i>All-India</i>	138	106	104	126	138	112	83
<i>Maximum</i> duration of Cane-crushing season in <i>All-India</i>	184	208	172	179	203	181	184
<i>Mean</i> duration of Cane-crushing season in <i>U. P.</i>	136	112	107	134	140	124	77
<i>Mean</i> duration of Cane-crushing season in <i>Bihar</i>	149	105	109	124	150	99	79
<i>Mean</i> duration of cane-crushing season in " <i>All other Provinces</i> "	112	84	90	112	138	103	97

* *Vide* Indian Trade Journal, Calcutta, dated 7th September, 1939, and previous issues.

TABLE NO. 10

*Acreage under Sugar-cane, under improved Varieties, Production of Cane per Acre, Gross production of Gur, and Calculated Production of Cane-crop.**

Year	Total acreage under sugarcane in thousand acres	Acreage under improved varieties in thousand acres	Average cane production per acre (in tons)	Gross production expressed as gur (in thousand tons)	Calculated production of sugar cane (10-11 factors) (in thousand tons)
1930-31	2,905	817	12.3	3,359	35,780
1931-32	3,076	1,170	14.1	4,116	43,316
1932-33	3,425	1,845	14.9	4,859	51,129
1933-34	3,422	2,295	15.3	5,055	52,455
1934-35	3,602	2,433	15.1	5,292	54,346
1935-36	4,154	3,056	15.3	6,102	61,202
1936-37	4,582	3,452	15.6	6,704	67,322
1937-38	3,869	2,968	15.5	5,452	55,637
1938-39	3,108	2,424	15.0	4,090	—
1939-40	3,731	—	—	—	—

TABLE NO. 11

*Percentage of Cane used under different heads during the years 1932-33 to 1938-39 (November-October)***

	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38 (Our Est)	1938-39 (Our Est)
Cane used in factories	6.5	9.8	12.3	16.0	17.6	17.8	15.00
Cane equivalent of gur used in refineries	3.0	2.0	1.2	1.4	0.5	0.5	—
Cane used for gur manufacture	64.7	65.5	66.0	63.8	64.9	62.0	—
Cane used for other purposes, including Khandsari, Chewing, setts for planting etc.	25.8	22.7	20.5	18.8	16.9	19.7	—
Total percentage	100	100	100	100	100	100	100

* Vide Trade Journal, 7th September, 1939.

** Vide Reply in the Assembly to Question No. 807, dated 7th March, 1939.

† Excluding Burma.

TABLE NO. 12

Percentage of cane crushed in factories to the total cane-crop in various Provinces.

Season	U. P.	Bihar	Bombay	Bengal	Madras	India
1934-35	13.2	30.9	8.0	2.7	5.0	12.3
1935-36	16.3	40.4	11.7	4.8	5.4	16.0
1936-37	15.6	49.3	13.0	5.2	6.0	17.6
1937-38	(Our Est.) 16.9	43.1	14.0	17.8

TABLE NO. 13

Cost of Production of Cane per maund.

- (a) Definite figures are not available. Cost of production varies from Province to Province from annas 0-3-0 to annas 0-7-0 per maund. (*Vide* 1939 annual).
- (b) Average cost of Production of Cane in Bihar, according to Bihar Government figures for 1936-37 was roughly between 2½ and 3½ annas per maund.
- (c) Enquiry into the cost of production of sugarcane and cotton undertaken by the Imperial Council of Agricultural Research in 1934, is concluded. Reports of cost in various Provinces published in 1938, and 1939, and also referred to in Tariff Board's Report (1937).

TABLE NO. 14

Estimate of total amount of money paid by Sugar Factories, to Cane-Cultivators, and Workers since 1931-32

Season	Estimated Average price per maund of cane in U. P. & Bihar			Estimated amount paid for cane by factories to Cultivators (1)	No. of unskilled workers employed (2)	Estimated amount of money paid to unskilled workers (3)
	Rs.	As.	P.	Rs.	No	Rs.
1931-32	0	5	10	1,77 51,000	16,640	998,000
1932-33	0	5	6	3,14,39,000	29,640	1,778,000
1933-34	0	5	6	4,83,98,000	67,200	4,032,000
1934-35	0	5	3	5,97,66,000	78,000	4,680,000
1935-36	0	5	3	8,78,02,000	82,200	4,932,000
1936-37	0	4	0	7,80,00,000	100,000	6,000,000
1937-38	0	5	3	8,80,00,000	100,000	6,000,000
1938-39	0	7	0	8 50,00,000	100,000	6,000,000

- (1) Based on statistics received from a large group of factories in U. P. and Bihar.
- (2) Based on an assumption of an average factory employing about 600 workers.
- (3) Based on an estimate of payment of 0-8-0 per day, on an average working period of 120 days.

TABLE NO. 15

Minimum cane-price schedules in U. P. and Bihar in 1934-35, 1935-36 and 1936-37.

The minimum price for the purchase of cane was fixed by Legislation in U. P. and Bihar during 1934-35 with a view to secure fair price of the growers, under Sugar Cane Rules framed under the Sugarcane Act, 1934.* The following schedules which were adopted by the respective Provinces for fixing the minimum price for each fortnight according to variations in the price of sugar, during the season 1934-35 continued to operate in 1935-36, and in 1936-37, provision was also made for minimum price of cane corresponding to an average price of sugar between Rs. 6 and Rs. 6-8 in view of the fall in price of sugar, during 1936-37.

Fortnightly varying sliding scale of cane-prices, in operation from 1934-35 up to 1936-37.

BIHAR.								THE UNITED PROVINCES.							
Average price of sugar.				Corresponding Minimum price of Sugarcane intended for use in				Average Price of sugar				Corresponding Minimum price of Sugarcane intended for use in			
				Open Pan Factories.		Vacuum Pan Factories.						Open Pan Factories.		Vacuum Pan Factories.	
Rs.	As.	Rs.	As.	As.	P.	As.	P.	Rs.	As.	Rs.	As.	As.	P.	As.	P.
Above		To						Above		To					
6	0	6	8	2	3	4	0	6	0	6	8	2	3	4	0
6	8	7	0	2	6	4	3	6	8	7	0	2	10	4	3
7	0	7	8	2	8	4	6	7	0	7	8	3	0	4	6
7	8	8	0	2	10	4	9	7	8	8	0	3	2	4	9
8	0	8	12	3	0	5	0	8	0	9	0	3	4	5	0
8	12	9	4	3	2	5	3	9	0	2	8	3	6	5	3
9	4	9	12	3	4	5	6	9	8	10	0	3	8	5	6
9	12	10	4	3	6	5	9								

Irreducible Minimum Price for the entire season in 1937-38.

Since the 1937-38 season, the minimum price for cane is not fixed every fortnight varying with the price of Sugar. The minimum cane price schedule which was in force till 1936-37 was abolished in the beginning of 1937-38. In Bihar and U. P. the irreducible

*Act repealed in U. P. and Bihar in 1938. U. P. and Bihar Sugar Factories Control Act, and Rules introduced in 1938.

minimum price of sugar cane was fixed for the entire season of 1937-38 at annas 0-5-3 per maund for gate cane, and annas 0-5-0 per maund for rail-borne cane.

Minimum Cane-price in U. P. and Bihar in the 1938-39 season.

In November 1938 the Governments of U. P. and Bihar issued Notifications (8683-A/XIIA dated 17th November, 1938, and No. 2017-D dated 16th November, 1938) respectively announcing the minimum cane price for Vacuum Pan factories during the whole crushing season 1938-39. The following were the cane prices thus fixed :—

	per std. md. of 82-2/7 lbs.	Rs. A. P.
1. Cane purchased at the factory (or within a radius of 5 miles therefrom in Bihar only) ...	0 6 9	
2. Cane purchased at outstations and transported by railway or other means at the cost of the factory for distances exceeding 5 miles but not exceeding 28 miles ...	0 6 6	
3. Cane purchased at outstations and transported by railway or other means at the cost of the factory for distances exceeding 28 miles ...	0 6 3	

On the 13th January, 1939, (vide Notification No. 313 S/RD) the Government of U. P. increased the minimum price of sugar-cane, with effect from January 15, 1939, due to a rise in the price of sugar, as follows :—

Area (A)

Meerut Division and Bijnore District.

1. For purchases at the factory ...	0 7 9
2. For purchases within 28 miles ...	0 7 6
3. For purchases at a distance of more than 28 miles	0 7 3

Area (B)

For cane purchased in the Allahabad, Lucknow, Jhansi, Agra and Kumaun divisions, in the Rohilkhand Division excluding the Bijnore District, in the Fyzabad Division excluding the Gonda and Bahraich districts and in the Benares Division excluding the Jaunpur district.

1. For purchases at the Factory ...	0 7 3
2. For purchases within 28 miles ...	0 7 0
3. For purchases at distance of more than 28 miles	0 6 9

Area (C)

For cane purchased in the Gorakhpur Division and in the districts of Gonda, Bahraich and Jaunpur.

			Rs. A. P.
1.	For purchases at the factory	0 7 0
2.	For purchases within 28 miles	0 6 9
3.	For purchases at a distance of more than 28 miles		0 6 6

The Bihar Government increased their minimum cane price for the purchase of cane in the whole of Bihar with effect from 12th February, 1939 (vide Notification No. 299-D dated 11th February, 1939) by only 0-0-3 per maund.

			per std. md. Rs. A. P.
1.	Cane purchased at the factory or within a radius of 5 miles therefrom	0 7 0
2.	Cane purchased at outstations and transported by railway or other means at the cost of the factory for distances exceeding 5 miles but not exceeding 28 miles	0 6 9
3.	Cane purchased at outstations and transported by railway or other means at the cost of the factory for distances exceeding 28 miles	0 6 6

The Government of the United Provinces further increased the cane price with effect from 3rd March, 1939 in the Meerut Division, and the Bijnore and Moradabad districts.

1.	For purchases at the factory	0 8 9
2.	For purchases within 28 miles	0 8 6
3.	For purchases at a distance of more than 28 miles		0 8 3

In the Province of Madras in the Hospet Area, the Government fixed a minimum price of cane at about Rs. 9-8 per ton, roughly equivalent to 0-5-7 per maund during 1938-39.

Cess on Cane at 0-0-6 per maund.

The Government of U. P. and Bihar levied a cess with effect from 16th November, 1938 of 0-0-6 per maund on all sugarcane

purchased by factories. The approximate the revenue derived from the cess in 1938-39 in the U. P. is Rs. 30 lakhs and in Bihar Rs. 15 lakhs. It is hoped that a major portion of the revenue thus derived will be spent on improvement of cane, eradication of diseases, procuring of healthy and hardy seeds, improvement of roads in the vicinity of factories etc.

Minimum Price of cane in U. P. and Bihar in 1939-40.

At a meeting of the U. P. and Bihar Sugar Control Board held at Patna on the 29th April, 1939, a Sub-Committee was appointed to report *inter alia* on the scheme of minimum price of sugarcane, and to consider the feasibility of a sliding scale of cane and sugar prices. This Sub-Committee consisting of two representatives of the Government, two representatives of the manufacturing interests, and two representatives of cane cultivating interests met at Nainital on 18th June, 1939 and recommended to the Sugar Control Board for adoption, the following sliding scale of minimum price of sugar-cane linked with the price of sugar:—

<i>Price of sugar per maund</i>				<i>Price of cane* per md.</i>			
Rs.	A.	P.			Rs.	A.	P.
7	12	0	and under	0	5 0
7	12	0	to Rs. 8 0 0	0	5 3
8	0	0	" " 8 4 0		...	0	5 6
8	4	0	" " 8 8 0		...	0	5 9
8	8	0	" " 8 12 0		...	0	6 0
9	0	0	" " 9 4 0		...	0	6 6
9	4	0	" " 9 8 0		...	0	6 9
9	8	0	to Rs. 9 12 0		...	0	7 0
9	12	0	" " 10 0 0		...	0	7 3
10	0	0	" " 10 4 0		...	0	7 6
10	4	0	" " 10 8 0		...	0	7 9
10	8	0	" " 10 12 0		...	0	8 0
10	12	0	" " 10 15 0		...	0	8 3
10	15	0	" " 11 2 0		...	0	8 6
11	2	0	" " 11 5 0		...	0	8 9
11	5	0	" " 11 8 0		...	0	9 0
11	11	0	" " 11 14 0		...	0	9 6
11	14	0	" " 12 1 0		...	0	9 9

*The price refers to gate-cane.

The basis of calculation of sugar prices will be the same as when the previous sliding scale was in use (*i.e.* in 1936-37).

The scale was unanimously accepted on the assumption of the existing rates of sugar excise, viz. Rs. 2 per cwt., Cess viz. 0-0-6 per maund of cane, and co-operative commission (for supply of cane to factories varying from 0-0-1 to 0-0-3 per maund) being maintained.

As a result of the unanimous recommendation of such a sliding scale, the Government of U. P. and Bihar have, we understand, decided to abandon their previous practice of fixation of a non-varying minimum price of cane for the entire season, and to introduce a system of fixing the minimum price of cane, every fortnight, varying with the price of sugar according to the above sliding scale or such modifications thereof as they wish to make, with effect from the commencement of the cane crushing season in November, 1939.

It will be remembered that during the season 1934-35, 1935-36 and 1936-37, cane prices were fixed fortnightly in U. P. and Bihar according to the then accepted schedule.

Minimum Cane-price scale adopted by Bihar and U. P. in 1939-40

U. P. Government's announcement regarding minimum cane-price for the first fortnight of the season ending 15th November, 1939.

On 27th October, 1939, the U. P. Government issued the following Press note in connection with fixation of minimum price of cane.

The Sugar Control Board appointed a Sub-Committee to examine the question of suitable minimum sugarcane prices payable by vacuum pan factories, and this Sub-Committee, which included representatives both of sugar manufacturers and cane growers, unanimously recommended that the minimum price for sugarcane should be fixed every fortnight in accordance with a sliding scale linking the cane price to the average price of sugar calculated as formerly on the basis of the ten highest price quotations at Cawnpore for first grade sugar manufactured in the United Provinces for delivery by factories on an F. O. R. basis. The Government have accepted this recommendation, but have on consideration of all the relevant circumstances slightly modified the scale of sugarcane prices recommended by the Sub-

Committee. The scale decided upon by the Government is as follows:—

	Rs.	A.	P.		Rs.	A.	P.		Rs.	A.	P.
Under	7	10	0						0	5	0
	7	10	0	to under	7	14	0		0	5	0
	7	10	0	" "	7	14	0		0	5	3
	7	14	0	" "	8	2	0		0	5	6
	8	2	0	" "	8	6	0		0	5	9
	8	6	0	" "	8	10	0		0	5	9
	8	10	0	" "	8	14	0		0	6	3
	9	2	0	" "	9	2	0		0	6	6
	9	6	0	" "	9	10	0		0	7	0
	9	10	0	" "	9	14	0		0	7	3
	9	14	0	" "	10	2	0		0	7	6
	10	2	0	" "	10	5	0		0	7	9
	10	5	0	" "	10	8	0		0	8	0
	10	8	0	" "	10	11	0		0	8	3
	10	11	0	" "	10	14	0		0	8	6
	10	14	0	" "	11	1	0		0	8	9
	11	1	0	" "	11	4	0		0	9	0
	11	4	0	" "	11	7	0		0	9	3
	11	7	0	" "	11	10	0		0	9	6
	11	10	0	" "	11	13	0		0	9	9
	11	13	0	" "	12	0	0		0	10	0

Thereafter the scale continues to rise as above.

In accordance with this scale, the minimum price for sugar cane for the period from November 1 to 15, 1939, was fixed as follows:—

	Per st. md.
For purposes at the factory 0 8 9
For purchases at Railway Stations within 28 miles	... 0 8 6
For purchases at Railway stations beyond 28 miles	... 0 8 3

The above prices are exclusive of the cane-cess of 0-0-6 per maund.

Minimum cane price in Bihar in 1939-40

The Bihar Government issued a notification on the 30th October, 1939, fixing the minimum cane-prices, in accordance with the scale adopted by the U. P. Government, and given above.

The Minimum cane-prices in Bihar from 1st November to 15th November, 1939 were as follows:—

	Price per Standard maund of 82-2½ lbs. avoirdupois.
(i) Cane purchased at the factory or within a radius of 5 miles therefrom ...	Eight annas & nine pies.
(ii) Cane purchased at outstations and transported by railway or other means at the cost of the factory for distances exceeding 5 miles but not exceeding 28 miles	Eight annas & six pies.
(iii) Cane purchased at outstations and transported by railway or other means at the cost of the factory for distances exceeding 28 miles. ...	Eight annas & three pies.

The above prices are exclusive of the cess imposed under section 29(2) of the Bihar Sugar Factories Control Act, 1937.

TABLE NO. 17

Quantity and value of Imports of Sugar (excluding re-exports and Molasses) in India in Tons (Net Figures) from 1929-30 to 1938-39 (April-March).*

Province	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons†	Tons†
Burma	42,680	40,162	28,335	26,391	19,649	17,428	16,231	3,926
Madras	90,899	83,610	78,201	53,782	53,884	49,793	39,314	189	(Excess re-export of 128 tons)	5,010
Bombay	211,027	212,847	128,884	111,346	97,408	80,063	80,731	276	2,572	12,239
Sind	218,700	230,589	109,391	85,618	59,822	50,282	42,524	3,903	9,206	13,182
Bengal	368,969	330,581	165,645	88,570	19,022	22,557	19,386	5,685	1,048	3,039
Total (British India) Tons	932,285	897,789	510,456	365,707	249,785	220,123	198,186	13,979	12,698	33,470
Value Rs. 13,34,41,259	10,47,24,818	5,90,44,392	4,07,18,023	2,63,03,043	2,04,67,091	1,85,43,143	9,33,104	14,66,538	42,10,102	
Kathiawar										
Ports	93,311	63,788	73,390	110,963	87,939	14,796	1,629	27,223
Value Rs.	1,06,19,578	76,51,159	75,10,678	96,57,949	77,23,384	12,36,148	74,262	28,16,281

* Government's Estimate of Revenue from Import Duty on Sugar and Excise Duty (Combined) for 1939-40 Rs. 4,20,00,000.

† Imports into Burma excluded from 1937-38.

TABLE NO. 18

Import Duties on Sugar in the Principal Countries in the World.
*Great Britain.**

Exchange Rates.	General Duty per cwt.	Preferential Duties Uncertifi- cated per cwt.	Dominion Colonial Certificated per cwt.	Excise Duty per cwt.
Great Britain.				
	sh. d.	sh. d.	sh. d.	sh. d.
Sugar of Polarization exceeding 99 ⁰	15 0 Rs. (7-8-0)	8 2 Rs. (4-0-0)	4 8·7 Rs. (2-5-0)	4 7 Rs. (2-3-11)
do 98 ⁰ not exceeding 99 ⁰	14 0 Rs. (6-13-9)	7 1·2 Rs. (3-7-8)	3 10·3 Rs. (1-14-3)	3 7·1 Rs. (1-12-2)
do 97 ⁰ do 98 ⁰	10 8·8 Rs. (5-4-2)	6 9·5 Rs. (3-5-3)	3 7·6 Rs. (1-12-6)	3 6 Rs. (1-11-5)
do 95 ⁰ do 96 ⁰	10 2·0 Rs. (4-15-9)	6 5·2 Rs. (3-2-5)	3 5·2 Rs. (1-10-11)	3 3·8 Rs. (1-10-0)

Note.—Assistance afforded to the farmers is included in the best price paid by the factories which was based on sugar contents. The actual rate of assistance to the factories is related to a price for raw sugar in the open market of 4s. 6d. per cwt.

* *Vide* International Sugar Journal, May 1939, and subsequent increase in duty in Great Britain in September 1939, as a war measure.

United States.

United States	Rates of Duty — in cents per lb.			
	Raw — 96 ⁰ polarisation.		Refined.	
	Full Duty	Cuban Duty	Full Duty	Cuban duty
4.90 dollars = £1 according to the latest federal Legislative Act, Sept. 1934	1·875 Rs. (4-3-2)	.90 Rs. (2-0-3)	1·9875 Rs. (4-7-2)	.954 Rs. (2-2-2)

Note.—Hawaiian sugars have been admitted to the United States free of duty since 1876.

Cuba.

	Minimum in pesos	Maximum per 100 Kilos
4.90 Pesos = 1 pound sterling 1 Import Duty		
Raw Sugar	1.0 Rs. (1-0-3)	2.0 Rs. (2-0-6)
Refined Sugar	0.9375 Rs. (0-15-3)	1.875 Rs. (1-14-6)

II. Preferential duty—Not existing.

III. Consumption tax—1.50 centavos per Spanish pound of refined sugar and sugar exceeding 96½ degrees (Rs. 3-5-0 per md.).

Import Duties on Sugar in the Principal Countries in the World.

Japan.

			Rate of Import duty	Specific duty by law No. 4 of 1932.
			Yen per 100 kin.	Rs. per md.
17 Yen=£. 1	1	(a) Under No. II Dutch Standard.	2.50	(1-3-3)
		(b) Under No. 22 Dutch Standard.	3.95	(1-14-6)
		(c) Other	5.30	(2-8-10)
		(d) Rock candy sugar, cube sugar, loaf sugar and similar sugars.	7.40	(3-9-1)

Germany, Holland, Italy, Russia.

Exchange rates.	Country	Import duties (Original currency)	Consumption taxes to be paid for imported sugar (Original currency)	Total charge imposed by duties and taxes (Original currency)			
		Raw	Refined.	Raw	Refined.	Raw	Refined.
12.18 marks	Germany	Reichmark	Reichmark	Reichmark	Reichmark	Reichmark	Reichmark
=£1		27	32	21	21	48	53
		Rs. (11-0-6)	(13-1-2)	(8-9-3)	(9-9-3)	(19-9-9)	(21-10-5)
		Guilders	Guilders	Guilders	Guilders	Guilders	Guilders
69 guilders	Holland	2.40	27	33.75	27	36.15	
=Rs. 100		Rs. (1-5-1)	(14-13-1)	(18-8-4)	(14-13-1)	(19-15-5)	
		Paper Lire	Paper Lire	Paper Lire	Paper Lire	Paper Lire	Paper Lire
93.02 Lire	Italy	110.10	165.15	364	380	474.10	545.15
=£1.		Rs. (5-14-3)	(8-13-4)	(19-7-6)	(20-5-3)	(25-5-9)	(29-2-7)
		<i>Ad valorem</i>	<i>Ad valorem</i>	<i>Ad valorem</i>	<i>Ad valorem</i>	<i>Ad valorem</i>	<i>Ad valorem</i>
	Russia.	80% 150 %	85.87% 83.86%		

India (1939)

Total Import Duty (with equivalent excise duty)	Rs. 8-12-0 per cwt. equivalent to (Rs. 6-7-0) per maund
Excise Duty on factory sugar in British India	Rs. 2-0-0 per cwt. equivalent to (Rs. 1-7-6) per maund

TABLE NO. 19

Excise Duty and Import Duty on Sugar, Sugar candy,† and Molasses in India.

On Sugar per cwt.	Protective Import duty per cwt.	Additional Revenue Duty	Total Import Duty per cwt.
From 1st April, 1932 to 31st March, 1934	Rs. 7-4-0	Revenue surcharge @ 25% of protective duty—Rs. 1-13-0	Rs. 9-1-0
From 1st April, 1934 to 27th February, 1937	7-12-0 (0-8-0 being additional margin)	Equivalent excise duty Rs. 1-5-0	9-1-0
(Rs. 1-5-0 Excise Duty on domestic production of factory sugar)		Equivalent excise duty Rs. 2-0-0	9-4-0
From 28th February, 1937	7-4-0		
(Rs. 2-0-0 Excise Duty on domestic production of factory sugar)		Equivalent excise duty Rs. 2-0-0	8-12-0*
From 1st April, 1939	6-12-0		
(Rs. 2-0-0 Excise Duty on domestic production of factory sugar)			

†From 20th February, 1934, a revenue duty of Rs. 10-8 per cwt. was imposed on *sugar candy* in place of Rs. 9-1-0 per cwt. The rate of import duty on *molasses* is 31¼ per cent. *ad valorem* since April, 1932.

*The Import Duty of Rs. 8-12-0 per cwt. works out at Rs. 6-7-0 per md. and Rs. 2-0-0 excise duty per cwt. works out at Rs. 1-7-6 per md.

TABLE NO. 20

Yield of Revenue from Import Duty on Sugar in India
(Burma excluded from 1937-38)*

Year (April-March)	Yield of Revenue Rs.
1931-32	7,97,63,000
1932-33	6,84,79,000
1933-34	4,72,04,000
1934-35	3,81,35,000
1935-36	3,24,16,000
1936-37	50,52,000
1937-38	25,33,000
1938-39	45,22,000
1939-40 (6 months up to September)	2,91,45,000

*Includes Sugar candy up to December, 1933.

For value of foreign sugar imported and rate of import duty on sugar, from 1920-21 to 1939-40, *vide* Table No. 14, on page 163 of the 1939 Annual.

TABLE NO. 21
Excise Duty on Factory Sugar produced in British India and Yield of Revenue from it during 1934-35, 1935-36, 1936-37 and 1937-38 (Burma excluded from 1935-36), Fiscal years (April-March)*

Class of Sugar	Amount of duty per cwt.	Yield of Revenue from Excise Duty.					Budget Estimate from Excise Duty (excluding Burma) for 1939-40 Rs.
		1934-35		1935-36		1938-39	
		Rs.	Rs.	Rs.	Rs.		
Khandsari Sugar	0-10-0 (up to 27th Feb. 1937) 1-0-0 (up to 28th Feb. 1939, and 0-8-0 from 1st Mar. 1939)	77,000	60,000	47,000	51,000	59,000	6,00,000 +
All other sugar	Rs. 1-5-0 (up to 27th Feb. 1937) Rs. 2-0-0 thereafter	96,45,000	1,58,24,000	2,52,02,000	3,30,97,000	4,22,44,000
Total		97,22,000	1,53,84,000	2,52,49,000	3,31,48,000	4,23,63,000	4,00,00,000

*Excise Duty on Khandsari Sugar was levied at the rate of Re. 1 per cwt. from 28th February, 1937, and at Rs. 2 per cwt. on other sugar produced in factories, from 28th February, 1937. There is no excise duty on palmyra sugar, the production of which was estimated at about 11,500 tons in 1936-37, and about 6,000 tons in 1937-38.

†Excise Duty on Khandsari Sugar reduced to 0-8-0 per cwt. from 28th February, 1939, but made applicable to all Khandsari Sugar, manufactured with the aid of power. Definition of Factory in the Sugar (Excise) Duty Act, 1934, modified, for making a larger quantity of Khandsari Sugar pay excise duty. Government's estimate is that 60,000 tons of Khandsari Sugar will pay excise duty in 1939-40.

TABLE NO. 22

Average price of Indian and Imported Sugar in India, per maund, of 82-2/7 lbs.

	1933	1934	1935	1936	1937	1938	1939
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Indian 1st quality, Special (Cawnpore Market average quotation) (Factory Delivery Basis)	9-9-0	9-6-0	9-0-0	8-4-0	7-0-0	8-8-0	(up to Oct.) 10-12-0
Imported Sugar (Calcutta market average quotation)	10-6-0	9-13-0	9-13-0	9-12-0	9-10-0	10-8-0	11-0-0

TABLE NO. 23

*Average price of gur per maund**

Gur market	1935			1936			1937			1938 (10 months)		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Lyallpur	4	15	0	3	13	0	3	0	0	3	9	10
Meerut	4	5	7	3	6	5	2	10	11	3	7	4
Siswa Bazar	3	7	6	2	10	6	1	7	2	2	3	6
Bhagalpur	4	4	0	2	15	10	2	1	1	3	10	5
Calcutta	4	8	9	3	5	0	4	0	7	5	6	6
Dacca	5	3	4	4	0	11	4	9	9	7	1	8
Madras	5	10	11	3	14	2	3	1	8	4	13	2
Ahmednagar	6	1	2	3	14	1	3	4	2	5	12	5

*Vide Reply in the Legislative Assembly dated 7th March, 1939.

TABLE NO. 24

Factory Sugar Excise Returns of British India month by month, during 1936-37, 1937-38, 1938-39 and 1939-40.*

Month	1936-37		1937-38		1938-39		1939-40	
	Amount of Excise Duty collected in 000's Rs.	Calculated issues of Sugar in Tons	Amount of Excise Duty collected in 000's Rs.	Calculated issues of Sugar in Tons	Amount of Excise Duty collected in 000's Rs.	Calculated issues of Sugar in Tons	Amount of Excise Duty collected in 000's Rs.	Calculated issues of Sugar* in Tons
	Rs.	Tons	Rs.	Tons	Rs.	Tons	Rs.	Tons
April	24,20	92,000	37,79	94,500	35,54	88,850	12,77	34,425
May	19,77	75,000	32,36	80,875	46,71	111,777	16,46	41,150
June	17,82	67,750	29,57	73,925	39,06	97,650	20,76	51,900
July	15,56	59,250	27,15	67,875	35,20	88,000	867	21,600
August	12,18	46,330	21,26	53,150	25,46	63,650	682	17,050
September	17,66	67,250	23,92	59,800	31,93	79,825	901	23,775
October	14,24	54,200	24,00	60,000	41,71	104,275	1592	39,800
November	14,55	55,330	23,13	57,825	27,42	68,550		
December	17,98	68,500	22,54	56,350	16,52	41,300		
January	20,54	78,250	28,10	72,500	20,58	51,450		
February	28,86	109,000	22,86	57,150	29,44	73,850		
March	52,88	201,400	38,29	95,725	72,77	181,925		
Total	25,624	974,620	33,097	830,000	42,244	10,51,102

*One Ton ordinarily refers to 10 bags.

**Duty increased from Re. 1-5-0 per cwt to Rs. 2-0-0 per cwt from 28th February, 1937.

N. B.—As excise duty on sugar issued out of factories in a particular month is charged in the following month, calculated issue of sugar always relates to the month previous to that in which excise duty is collected. Thus, 34,425 tons of sugar shown against April, 1939, were actually issued out of factories in March, 1939.

*Burma excluded from 1937-38.

Excise Duty in Indian States

The following Indian States produced sugar in 1937-38, and the amount of Excise Duty collected by them from the factories at the British Indian rate of Rs. 2 per cwt. is shown here in thousands of rupees :—

				(In thousands of rupees)
Kolhapur	214.9
Phaltan	371.2
Mysore	874.3
Jaora	145.1
Kapurthala	269.0
Rampur	1086.6
Baroda	20.3
Bhopal	48.5
Udaipur (Mewar)	14.1

Jaora and Mewar have agreed to levy duty at this rate, *only on sugar exported to British India.*

Kolhapur, Phaltan, Mysore, Jaora, Kapurthala and Rampur produce sugar in excess of the estimated requirements of their own population.

Vide, Reply in the Legislative Assembly dated 6th February, 1939.

TABLE NO. 25

Approximate Official Estimate of total Carry-over of Stocks of Sugar in India at the beginning of November, since 1931.*

Year					Tons
1931	32,000
1932	19,000
1933	9,000
1934	30,000
1935	23,000
1936	159,000
1937	211,000
1938	102,000
1939 (Our Est.)	105,000

* *Vide* Reply in the Legislative Assembly, dated 21st February, 1939.

TABLE NO. 26

Railway freight on Sugar.

Railway freight O. R. on sugar per maund from certain stations on the East Indian Railway and B. & N. W. Ry. to various Ports & Towns.

From Station		To Bombay	To Karachi	To Madras	To Vizagapatnam Town	To Coconada	To Howrah	To Rangoon	To Ahmedabad	To Tuticorin
Dehri-on sone	Ry.	1-0-0	1-1-3	0-14-5	0-14-5	0-14-5	0-8-3	0-14-3	1-0-0	0-14-5
Bihta	"	1-0-0	1-1-3	0-14-5	0-14-5	0-14-5	0-8-3	0-14-3	1-0-0	0-14-7
Guraru	E. I.	1-0-0	1-1-3	0-14-5	0-14-5	0-14-5	0-7-11	0-13-11	1-0-0	0-14-5
Rosa	"	1-0-0	1-0-0	1- 2-0	1-0-0	...
Lucknow	E.	1-0-0	1-0-0	1- 2-0	1-0-0	...
Motihari	"	1-1-6	1-2-0	1-0- 0	1-0- 0	1-0- 0	0-11-6	1-1-6	1-2-0	1- 2-2
Basti	B&N	1-0-3	1-0-6	1-1- 0	1-1- 0	1-1- 0	0-15-6	1-5-6	1-0-6	1- 3-2
Sardarnagar	W.Ry.	1-0-0	1-1-0	1-0- 6	1-0- 6	1-0- 6	0-13-8	1-3-8	1-1-0	1- 2-8

Railway freight on Sugar in India, Approx. 1000 miles Re. 1-1-0 per maund (by C/J schedule). Steamer freight from Java to India about 0-4-0 per maund.

TABLE NO. 27

Total Tonnage and Earnings from Sugar, refined and unrefined, for ... All Class I Rys., in India.

Year	Over East Indian Ry.		Over B. & N. W. Ry.		All Class I Rys.	
(Apl./March)	Rs.	Tonnage	Rs.	Tonnage	Rs.	Tonnage
1932-33	15 61	160	19,08	183	1,29,47	1,057
1933-34	27,73	275	33,01	335	1,66,73	1,461
1934-35	26,69	277	28,31	287	1,56,82	1,414
1935-36	23,87	280	28,48	326	1,59,30	1,524
1936-37	32,17	402	40,16	484	2,30,10	2,205
1937-38	28,13	362	43,14	497	2,11,31	2,047
1938-39	28,44	442	41,19	493

TABLE NO. 28

Total Tonnage and Earnings from Railway Freight on Sugar-cane on East Indian Ry. & B. & N. W. Ry.

Year (Apl./March)	East Indian Railway		B. & N. W. Ry.	
	Earnings	Tonnage of sugarcane carried	Earnings	Tonnage of sugarcane carried
	Rs.	Tons	Rs.	Tons
1933-34	4,07,900	3,49,200	11,98,800	1,149,900
1934-35	5,32,100	6,36,500	18,15,700	1,664,600
1935-36	8,21,400	8,66,100	15,50,800	1,712,200
1936-37	7,48,500	8,60,400	13,08,900	1,437,600
1937-38	7,22,200	9,27,500	13,20,000	1,598,000
1938-39	5,25,600	6,38,800	9,92,000	938,000

TABLE NO. 29

Approximate Railway freight on Sugar-cane in 1938-39

Railway	Kind of Wagon	Average capacity	Distance	Rate per Wagon
A. B. Ry.	4 wheeler	160 maunds	55 miles	Rs. 8-14-6
E. B. Ry.	4 wheeler	160 maunds	117 miles	Rs. 27-0-0
E. B. & A. B. Ry. combined	4 wheeler	160 maunds	54 miles	Rs. 17-8-0
B. & N. W. Ry.	4 wheeler	270 maunds	55-60 miles	Rs. 9-0-0
E. I. Ry.	4 wheeler	480 maunds	35 miles	Rs. 10-0-0
			up to 50 miles	Rs. 14-0-0
			up to 100 miles	Rs. 25-0-0

TABLE NO. 30

Export of Sugar from India by sea and by land† in Tons.

Years	By Sea		By Land	
	Quantity	Value	Quantity	Value*
(Nov.-Octr.)	Tons	Rs.	Tons	
1930-31	493		40,126	
1931-32	382	67,831	26,535	
1932-33	356	53,254	31,472	
1933-34	434	73,273	30,077	
1934-35	357	60,295	29,375	
1935-36	449	67,524	27,053	
1936-37	10,640	19,32,954	35,062	
1937-38**	8,668	18,13,541	31,097	
1938-39 (8 months)	1,980	4,76,161	19,265	

*Value not recorded by the Dept. of Commercial Intelligence and Statistics.

**From April 1937, figures of exports to Burma are included.

†Export of Sugar by Sea to countries other than Burma is prohibited up to May, 1942, by the International Sugar Agreement.

TABLE NO. 31

*Expenditure on Sugar Research by the Imperial Council of Agricultural Research.**

Years	Amount Spent Rs.	Directions in which spent.
1934-35	4,01,346	Production and testing of new varieties of sugarcane.
1935-36	4,79,088	
1936-37	3,88,627	Devising and testing systems of cultivation and manuring.
1937-38	3,72,000	Study and combating of insect and fungus pests.
1938-39	(Not yet available)	Research into use of molasses as manure and cattle food.

These sums are in addition to a sum of Rs. 32 lakhs which have been made available to Provincial Governments from the Sugar Excise Fund during four years ended March, 1938.

* *Vide* reply given by Sir Girija Shankar Bajpai on the 21st March, 1938, in reply to a question, in the Central Legislative Assembly. Also his reply on the 30th March, 1937.

TABLE NO. 32

*Estimated Percentage of Gate-cane to the Total Quantity of Cane Crushed by Factories in the Various Provinces.**

Province	1934-35	1935-36	1936-37	1937-38	1938-39
	%	%	%	%	%
North Bihar	51	51	61	56	57
South Bihar	34	43	37	34	36
Total Bihar	48	50	58	53	53
United Provinces	65	66	68	72	66
Bengal	22	26	45	55	54
Punjab	—	51	61	69	57
Bombay	100	100	100	100	100
Madras	—	35	67	71	72

*Compiled by the Indian Sugar Syndicate Ltd. in September 1939.

TABLE NO. 33

Consumption of Sugar by Provinces (November-October).

Name of Province.	1934-35 (Nov.-Oct.)			1935-36 (Nov.-Oct.)			1936-37 (Nov.-Oct.)		
	Production in 000's tons.	Consumption in 000's tons.	Per capita Consumption in lbs.	Production in 000's tons.	Consumption in 000's tons.	Per capita Consumption in lbs.	Production in 000's tons.	Consumption in 000's tons.	Per capita Consumption in lbs.
Bengal ...	19	140	5.9	31	158	6.7	174	24	7.3
Bombay ...	33	243	18.0	36	212	15.5	223	38	16.2
Madras ...	29	85	3.4	34	72	2.8	100	21	3.9
Bihar and Orissa ...	189	57	2.9	258	62	3.1	70	329	3.5
United Provinces ...	444	124	5.4	647	131	5.6	125	603	5.4
Punjab (N.W.F.P.) Delhi	27	213	13.5	89	233	14.6	265	14	16.5
C P. and Berar	40	4.8	...	40	5.1	43	...	4.9
Assam	11	2.5	...	14	3.5	17	...	3.6
Sind and British Balu- chistan	20	8.8	...	22	9.5	25	...	10.2
Rajputana	49	8.9	...	53	9.5	58	...	10.6
Central India	26	5.5	...	28	6.1	35	...	6.4
Nizam's Territory	17	2.5	...	18	2.6	19	...	2.7
Kashmir	2	1.5	...	2	1.2	3	...	1.7
Mysore	5	1.5	...	8	2.6	10	...	2.9
Burma	27	3.9	...	21	3.1
ALL-INDIA	1,059	6.5	...	1,074	6.5	1,167	...	7.3

*Vide Review of the Sugar Trade of India 1937-38 in the *Indian Trade Journal*, dated 2nd November, 1939 and previous issues.

TABLE NO. 34

*Total Production, Import, and Export of Molasses in India†
for the last 8 years.*

Year	Production of Molasses in India in Thousand Tons				Import of Molasses into British India (Tons) Apt.-Mar.	Export of Molasses from British India (Including Palmyra and cane jaggery) (Tons) Apl.-Mar.
	From Cane factory	From Gur Refine- ries	From Khand- sari.*	Total*		
Nov.-Oct.						
1931-32	69	46	250	365	40,191	740
1932-33	130	56	275	461	31,991	819
1933-34	190	40	209	430	2,401	1,201
1934-35	234	22	150	406	415	1,153
1935-36	337	33	125	495	Nil	1,026
1936-37	406	10	100	516	Nil	24,195
1937-38	349	8	125	482	5	79,167
1938-39	242	7	100	349	2,160	52,676

†After 1936-37, statistics Re: Burma are excluded.

*Official Estimates.

TABLE NO. 35

Total value of Sugar Machinery Imported in British India.

(In thousands of Rupees)

Source	1932-33 Rs.	1933-34 Rs.	1934-35 Rs.	1935-36 Rs.	1936-37 Rs.	1937-38 Rs.	1938-39 Rs.
United Kingdom	91,48	1,95,87	73,60	49,70	68,49	43,15	30,16
Other Countries	61,63	1,40,51	31,84	16,00	26,66	26,21	31,20
	<u>1,53,11</u>	<u>3,36,38</u>	<u>1,05,45</u>	<u>65,70</u>	<u>95,16</u>	<u>69,37</u>	<u>61,36</u>

TABLE NO. 36

Calculated Net Production of Gur in India for direct consumption, from 1927-38 to 1938-39.*

Year. (November-October)	Calculated net Annual Production of Gur for direct consumption in Tons.			
1927-28	2,279,000
1928-29	1,787,000
1929-30	1,842,000
1930-31	2,241,000
1931-32	2,758,000
1932-33	3,240,000
1933-34	3,486,000
1934-35	3,701,000
1935-36	4,101,000
1936-37	4,268,000
1937-38	3,364,000
1938-39 (Our Estimate)	3,200,000

*Figures for net production are calculated from the figures for total yield of Gur in the "Final general Memorandum" each year allowing for the Gur equivalent to cane used for other purposes (adopting the conversion factor of 10). *Vide* Review of the Sugar Industry of India for 1937-38, issued as supplement to the Indian Trade Journal, dated 2nd November, 1939.

TABLE NO. 37

*Increased Profit from Growth of Improved Varieties of Cane.**

	Per Canal Bigha (5½ acre.)	
	Desi Cane	Improved Cane
	Rs. A.	Rs. A.
Cost of Seed, Cultivation and Manuring	51 6	55 10
Irrigation	7 4	7 4
Rent	10 0	10 0
Total Cost Rs.	68 10	72 14
Yield, Maunds	250 0	350 0
Value of Gur, 10% Recovery at Rs. 3 per maund	75 0	150 0
Profit Rs.	6 6	32 2

* *Vide Report of Sir John Russell, on the work of the Imperial Council, 1937 pp. 102.*

TABLE NO. 38

Cane factory Production of Sugar in U. P., Bihar, and All India (in Tons).

Season	U. P.	Bihar	All-India	Total Quantity of cane-crushed in Factories in tons
(Cane-Factories Production Figures only)				
1931-32	66,312	75,091	1,58,581	17,83,000
1932-33	1,40,344	1,28,610	2,90,177	33,50,000
1933-34	2,73,774	1,39,957	4,53,965	51,57,000
1934-35	3,15,600	1,84,038	5,78,115	66,72,000
1935-36	5,30,000	2,50,200	9,32,100	98,01,000
1936-37	6,08,600	3,29,300	11,11,400	1,10,87,000
1937-38	5,31,300	2,25,300	9,30,700	99,16,400
1938-39	3,20,300	61,600	6,50,800	70,04,800

TABLE NO. 39

Syndicate's Grading & Price Chart per Maund of Sugar for 1938-39.

CRYSTALS.

Colour :	26	25	24	23	22	21	20	19
(Grain)	A Rs. 9/11/6	9/10/6	9/9/0	9/8/0	9/5/6
	AB,, 9/10/0	9/9/6	9/8/3	9/7/3	9/5/0
	B,, 9/9/6	9/8/6	9/7/6	9/6/6	9/4/6
	C,, 9/8/0	9/7/0	9/6/6	9/5/3	9/4/6	9/3/6	9/2/6	9/1/6
	D,, 9/7/6	9/6/6	9/6/0	9/5/0	9/4/0	9/3/0	9/2/0	9/1/0
	E,, 9/7/0	9/6/0	9/5/6	9/4/6	9/3/6	9/2/6	9/1/6	9/0/6
	FINE 9/6/0	9/5/6	9/5/0	9/4/0	9/3/0	9/2/6	9/1/6	9/0/6
Crushed Sugar			9	...	9/4/-			
			10	...	9/7/-			
			11	...	9/8/-			
			12	...	9/9/-			

Note : All the above rates are for sugar of over 96 Pol.

TABLE NO. 40

Recovery of Sugar from Cane during the five Seasons 1934-35 to 1938-39.

Provinces.	Recovery of Sugar per cent Cane.				
	1934-35	1935-36	1936-37	1937-38	1938-39
United Provinces	8.56	9.60	9.65	9.18	9.14
Bihar ...	8.79	8.93	9.20	9.58	9.00
Other Provinces ...	8.77	9.00	9.60	9.77	9.91
All-India	8.66	9.29	9.50	9.38	9.29

TABLE NO. 41

Production of Sugar directly from Cane in Modern Factorics in India, 1929-30 to 1938-39, and Recovery Percentage for Java

Season	Number of Factories producing Sugar direct from Cane.	Cane crushed	Sugar produced	Percentage Recovery for India	Percentage Recovery for Java.
		Tons.	Tons.		
1929-30 ...	27	989,776	49,768	9.07	11.82
1930-31 ...	29	1,317,248	119,859	9.09	11.36
1931-32 ...	32	1,783,499	158,581	8.89	10.40
1932-33 ...	57	3,350,231	290,177	8.66	11.16
1933-34 ...	112	5,157,373	453,965	8.80	12.64
1934-35 ...	130	6,572,630	578,115	8.66	12.35
1935-36 ...	137	9,801,748	932,100	9.29	13.21
1936-37 ...	137	11,687,200	1,111,4000	9.50	11.62
1937-38 ...	136	9,916,400	930,700	9.38	11.40
1938-39 ...	139	7,001,800	650,800	9.29	...

TABLE NO. 42

Java Sugar Statistics from 1935-36 to 1939-40

April 1 to July 31

(In long tons)

Crop year	Initial Stock April 1	Production	Exports	Consump- tion	Final Stock July 31
1935-36	1,585,397	268,606	300,412	95,032	1,458,559
1936-37	942,556	260,999	291,554	94,600	817,401
1937-38	241,133	679,584	373,811	100,500	446,406
1938-39	309,486	731,601	430,165	100,750	510,172
1939-40	206,579	860,469	437,210	104,000	525,838

*Vide Lamborn Weekly Report, issue of October 11, 1939.

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The Indian Sugar Industry— (1939 Annual)

PART I.

(A Review of the Sugar Industry in India during the 1938-39 Season)

Introductory.

THERE is hardly any bright feature to be chronicled for the Indian Sugar Industry for the 1938-39 season,* with the exception of (1) the elimination of inefficient and unhealthy competition in the matter of sales of sugar amongst the factories, thanks to the establishment and successful functioning of the Common Sugar Sales Regulating Organisation of the Industry, viz. The Indian Sugar Syndicate Ltd., whose membership was made compulsory for every sugar factory working in the U. P. and Bihar as a result of the enactment in those Provinces of the Sugar Factories Control Act,** the events leading to which have been discussed in detail in our 1938 Annual, and (2) the action taken on the recommendations of the U. P. and Bihar Joint Power Alcohol Committee Report, by the U. P. Government for passing the U. P. Power Alcohol Act† for permitting the manufacture of Power Alcohol by mills under a license and for making the admixture of such Alcohol with Petrol compulsory in the United Provinces.

Chief Features of 1938-39.

The Industry, it is a matter for regret, could not maintain its progress during the year, in various spheres. Among the remarkable

*The season referred to is November-October.

**The Sugar Factories Control Act of Bihar and of U. P. of 1938 is the first piece of legislation in India providing for planned production and rational distribution, not only of the raw material, viz., cane but of the manufactured product, viz., sugar. The text is given in "The Sugar Industry at a Glance" page 25.

†It is expected that the Bihar Government will also pass an Act with similar aims before long. The text of the U. P. Act is given in "The Sugar Industry at a Glance" page 80.

✓features of the 1938-39 season, we would refer here to the following :—

(1) The total production of sugar declined, (2) the duration of the cane crushing season was considerably curtailed, the season being the shortest on record, (3) the total acreage under cane and the quantity of cane available to factories were greatly reduced, (4) the quality of cane deteriorated due to floods, adverse weather conditions, and diseases, (5) the quantum of Tariff Protection to the Industry was changed *in the middle of the season* and fixed at a lower level of Rs. 8-12 per cwt. with effect from the 1st April, 1939, by the Government of India, inspite of the recommendations made for maintaining the existing protection up to 31st March, 1946, by the Tariff Board, whose report was published on the 30th March, 1939, *i.e.*, 15 months after its submission, (6) the period of such protection was also fixed only for *two* years, before the expiry of which still another inquiry would be undertaken in the industry, thus leaving the industry in suspense in regard to the extent of the protection for the remaining period, (7) a Cess of Rs. 0-0-6 per maund of cane was levied from the commencement of the cane crushing season in November 1938, from the factories, for the first time in the history of the industry, by the U. P. and Bihar Governments and under the Sugar Factories Control Rules, factories had to purchase the bulk of their cane from co-operative societies and had to pay a commission for the purpose, varying from 0-0-1 to 0-0-3 per maund of cane, (8) the average recovery of sugar from cane fell appreciably in Bihar, U. P., Bengal, and also for All-India, (9) the minimum prices of cane fixed from the commencement of the season by the Governments of U. P. and Bihar were the highest, fixed so far, and were raised subsequently still more, later in the season, (10) sugar, import of which had well-nigh stopped during the last two years, had to be imported once again from Java and other countries in quantities exceeding 275,000 tons owing to the shortage of Indian production, (11) wide fluctuations in sugar prices were witnessed during the year, as a result of the operations of the speculators which resulted in losses to a large number of merchants, who unaware of the activities of one another, happened to enter into forward contracts for Java sugar at progressively increasing rates in total quantities which turned out larger than were required for meeting the shortfall in the Indian market, (12) the prices of sugar ruled high throughout the season and soared as high as Rs. 13 per maund during May 1939, to the distress of the consumers, followed by a catastrophic fall only a month later resulting in a chaotic condition in the sugar trade, and the allocation of the blame

for raising the prices to such high levels on the Indian Sugar Syndicate Limited, which did its best to keep down the prices of sugar as far as possible by issuing instructions to factories to sell sugar freely and by even relaxing its rule for ready sales and permitting factories to sell forward and by issuing larger quantities in order to serve adequately the markets with sugar, (13) unlike the previous two seasons, the price of Indian Sugar was determined during the major part of the year by the parity of the price of imported sugar in the port markets, (14) there were serious labour troubles and strikes in several factories in Bihar and the U. P., which necessitated the intervention of Government authorities, who settled the issues by persuading the factories to give higher wages etc. to workers, (15) an enquiry into the conditions of labour employed in the sugar factories (as also other industries) in Bihar was conducted by the Bihar Labour Enquiry Committee, and also by a Committee appointed by the U. P. and Bihar Sugar Control Board in April, 1938 "to enquire into the working of the Sugarcane Rules and Labour Conditions prevailing in sugar factories in U. P. and Bihar," the reports of both of which are not yet submitted, (16) a great divergence of views was noticed between the Indian Sugar Syndicate Limited, and the Indian Sugar Mills Association representing the industry on the one hand, and the Governments of U. P. and Bihar on the other, in regard to (a) the high level of minimum prices fixed for cane initially and raised subsequently (b) discrimination in the matter of increases in cane prices in some areas in the U. P., as compared to others, (c) imposition of a cane cess by U. P. and Bihar at the maximum level of 0-0-6 per maund and the method of its utilisation, (d) the fixation of basic prices of sugar by the Syndicate at a certain level which the Governments considered too high, owing to a difference of opinion in regard to the estimate of cost of manufacture of sugar per maund in the factories, and the profit to be allowed to them, (e) the action of the U. P. Government in giving permission for the establishment of new factories and for extensions in the plant of several existing factories, in spite of the definite advice and opinion to the contrary from the Syndicate and the Sugar Mills Association, (f) alteration in the basis of the fixation of minimum cane prices and its proposed linking as in 1936-37 with the price of sugar by means of a sliding scale, with fortnightly variations, with effect from the 1939-40 season, as against the system adopted during the 1937-38 season of fixing a single irreducible minimum price of cane throughout the entire season, and during the 1938-39 season of making arbitrary increases in such

minimum price etc. (17) the profits of the U. P. and Bihar factories* declined considerably as compared with the previous season (in spite of the large increases in the price of sugar during the off-season *i.e.*, after April, 1939, of which the mills could take little advantage—the bulk of the sugar having been sold previously according to the quotas issued by the Indian Sugar Syndicate), as the cost of manufacture in the factories, particularly, in the U. P., Bihar went up considerably higher due to smaller crushing, shorter cane-crushing season, lower recovery of sugar and payment of cess and commission to Co-operative Societies, and (18) the grower of cane in U. P. and Bihar has been greatly benefited as he has been able to realise a high price for his cane which gave him a handsome profit over his cost of production.

1938-39 an unfavourable season.

Speaking generally, the 1938-39 season has been very unfavourable for the factories, particularly, those in the U. P. Bihar, and Bengal, where the production of sugar was considerably smaller as compared with the previous seasons, and where the cost of manufacture was greatly increased due to the shorter cane crushing season, smaller quantity of cane crushed and the lower recovery of sugar from cane. The principle cause of such a large decrease of production of sugar in India during the 1938-39 season—a decrease of about 30 per cent as compared with the previous season, and of about 42 per cent by as compared with the 1936-37 season—was the scarcity of sugarcane owing to the reduction of the acreage under sugarcane, and the crop failures over extensive areas in U. P. and Bihar, the two chief sugar producing Provinces for India, which (along with the *Khandsari* production), were responsible for a production of about 77 per cent of the total sugar produced in India during 1938-39.

Shorter Crushing Season.

The cane crushing season for 1938-39 proved to be the shortest on record, since 1932, in the United Provinces, Bihar, and Bengal. The majority of factories in U. P. and Bihar commenced crushing at a later date, and had also to stop working by the middle of March

*While the bulk of the factories in U. P. and Bihar were able to make smaller profits, the factories in other parts of India, like Mysore, Madras and Bombay made larger profits, as they had not to pay such high prices of cane and any cess on cane etc. This is a factor which merits close attention of the industry and the Provincial Governments. Large profits made by factories located outside these provinces will certainly lead to further development in those parts and the replacement of the sugar now supplied in those parts by U. P. and Bihar factories to the detriment of the latter.

1939, and indeed in some parts of U. P., the cane crushing season closed about 8 weeks earlier, and in Bihar about four weeks earlier than in the previous season. Of the factories which worked in U. P. and Bihar, as many as 70 closed down before the first week of March as compared with about 8 only during the previous season. The (mean) number of days of actual working of factories in the United Provinces fell to 77 as compared with 124 in the previous season, in Bihar to 79 as compared with 99 during the previous season, and in All-India to 83 as compared with 112 during the previous season. The minimum number of days in U. P. was 23, and in Bihar 43, as compared with 73 and 70, respectively in the previous season. It must be observed here that the Mysore Factory works for about nine months in the year, having two crops of cane.

The average daily cane crushing capacity of factories in U. P. was 680 tons as compared with 710 during the previous season, in Bihar 710 as compared with 720 during the previous season, and for All-India 630 as compared with 660 during the previous season. The average percentage recovery of sugar from cane during 1938-39 also fell to 9.14 in the U. P. from 9.18 in 1937-38, to 9.00 in Bihar from 9.58 during the previous season, and to 9.29 for All-India as compared with 9.38 during the previous season. The maximum recovery for All-India was 12.25 as compared with 11.63 during 1937-38. Four factories in Bombay and two in Indian States had recovery of over 11 per cent, during 1938-39.

Further development of Industry in U. P. and Bihar detrimental.

As a result of the Sugar Factories Control Act in U. P. and Bihar there were no large extensions made to the plants during the year except in the case of a few factories which were allowed by the Government of U. P. to make additions, largely on the grounds of increasing their efficiency and of balancing their plants. Under the U. P. and Bihar Sugar Factories Control Rules, applications have to be made previously to the Government for permission for making extensions to plants or for erection of new factories. The Indian Sugar Mills Association and the Indian Sugar Syndicate continued to oppose all applications for the erection of new factories, and all applications for extensions which were not purely for increase of efficiency.

At a meeting of the Sugar Control Board held at Lucknow on the 12th November, 1938, a Sub-Committee was appointed to report on:—

(1) Whether there was scope for further factories in the United Provinces and Bihar, keeping in view the interests of cane growers and the possible difficulties in the distribution of sugar in maintaining prices at a level which will be adequate for manufacturers and fair to consumers, (2) if there is scope for more factories, what are the suitable areas where they can be located, (3) and what procedure should be adopted for inviting applications and granting licenses for new factories. The Indian Sugar Mills Association also dealt with this question and addressed a letter to the Sugar Control Board in January, 1939, expressing the following opinion: (1) It is not desirable to allow any new factories to be erected for the present, whether in the name of shifting or otherwise, (2) even if conditions change and expansion appears to be desirable, preference should be given to existing factories for extension in order to reduce the cost of production, and (3) at present even the extension of the existing factories in U. P. and Bihar does not appear to be desirable.

During the year inspite of protests from the Syndicate, the Government of U. P. after consulting the Sugar Control Board, gave permission for extensions of plants to a large number of factories and for the erection of two new factories. It must be observed, however, that the Government of Bihar have not been so liberal in this matter, and have practically refused all applications for extensions to plants in Bihar. It would be desirable both for the Governments of U. P. and Bihar not to give permission for extension of plants as otherwise the cane crushing capacity within the province will be increased, the purpose of enacting the Sugar Factories Control Act with a view to regulate the production of sugar will be frustrated, and the industry in these two provinces will be affected adversely as a consequence of the increased production which will be difficult to market in other Provinces and Indian States which are also developing the industry in their areas. We therefore, suggest in the interest of the industry, with all emphasis at our command, to both the U. P. and Bihar Governments that permission should not be given to existing factories for additions to their crushing capacity or for erection of new ones under the present circumstances of the industry. What is more, if and when there is any need for further expansion of the industry to meet the increased demand of sugar, we suggest that an opportunity should be given to other Provinces to develop the industry, if they wish to do so.

Number of factories working in 1938-39.

While the number of factories working in 1933-34 suddenly sprang up to 112 from 57 in 1932-33, the number of factories actually working in 1934-35 was only 130, in 1935-36, 137, in 1936-37, 137, in 1937-38, 136, and in 1938-39, 139 (excluding 2 factories in Burma).*

A perusal of the statistics of the number of factories working will show that the number has increased from 6 to 8 in Bengal, from 9 to 11 in the Indian States, while it has decreased from 8 to 7 in Madras. The total number of factories in the United Provinces and Bihar has remained stationery at 101.

Sufficiency of Sugar Production.

A glance at the table regarding production of sugar in India during the last three years will show that if the existing sugar factories are able to work for a period of 130 days which, the Tariff Board suggests, may be taken as the average number of working days, it will be possible for the sugar factories to produce sugar to the extent of about 13,00,000 tons, which is considerably higher than the present estimated consumption of sugar in India. The reason for the considerably smaller production of sugar during the last two seasons lies in the scarcity of cane crop due to natural calamities, like floods, and prevalence of disease and consequently shorter duration of the cane crushing season. The total cane crushing capacity of the plants in the existing factories is enough for producing the present requirements of sugar in the country and indeed even a little more, for exporting if possible or for catering for fresh markets like Afghanistan, Ceylon, Tibet etc. There is therefore no necessity, at the present time, of any extensions to the crushing capacity of factories or additions of new factories for meeting the requirements of sugar of the country. In fact, the stage can be said to have definitely been reached when India has become self-sufficient in so far as the requisite supply of sugar needed annually for her internal consumption is concerned (and for the next two years at any rate, there seems to be little possibility of finding any export market by sea outside India, owing to India having been made a party to the International Sugar Agreement not to export sugar till May, 1942).

*During the year 140 cane factories worked out of 158 factories existing in India. Of the 18 factories which did not work, 2 were in Bengal, 2 in Punjab and 2 in Indian States, 1 in Bihar, 5 in Madras and 6 in U. P. Of the 140 factories which worked in the season, one is a small Experimental Factory in U. P. for training students with a nominal and uncertain out-put and has therefore been ignored.

Future of industry lies in proper cane-development.

During December 1937 and January 1938, the Governments of Bihar, and the U. P. passed the Sugar Factories Control Act to help the industry to tide over the period of anxiety caused by the lack of co-operation among the factories which started a cut-throat competition in the sales of sugar owing to over-production in 1936-37 season, and which brought down the prices of sugar to an unremunerative level, as low as Rs. 5-12 per maund (inclusive of the Excise Duty of Rs. 1-7-6 per maund). While the industry has now achieved practically self-sufficiency in the matter of supplies of sugar, (it is a matter for regret that it was necessary to import such large quantities of sugar from Java during the last season due to failure of the cane crop) it has not yet been possible for the industry to consolidate its position for various reasons. It must be admitted that the Governments of U. P. and Bihar have done a lot for improving the cultivation of cane by introduction of improved varieties. Yet however, much remains to be done for improving the quality of the sugarcane crop by providing, for instance the cultivators with sound hardy, healthy and disease-free seeds of early ripening and late ripening varieties, suitable manures, irrigation facilities, etc., with a view to increase the average yield of cane per acre, which at present is only about 16 tons, in order that the cost of production of cane may be appreciably reduced and the industry may be able to establish itself on a sound, stable, satisfactory and solid footing before long. Immediate and vigorous action in regard to the improvement of the cane crop in various ways, referred to elsewhere, is called for if the industry is to be stabilised in the country before long, and if its dependence upon a high tariff is to be progressively reduced within the next six years. The Government, the industry, and agriculturists should realise the fact at once that *upon the improvement of the cane crop and reduction of the price of raw material which works out to about 52 per cent of the cost of sugar, hinges the entire future of the industry in India.* ✓

Reduction of Protection likely.

While it is true that the Indian Sugar Industry has made magnificent progress during the last 7 years it cannot afford to rest on its past laurels, and it must exert its best to maintain its position and to make such improvements as would enable it to be established with the aid of a minimum Tariff before protection to the industry expires in 1946. As a matter of fact, the protection to the industry which was reduced in March 1939 from Rs. 9-4 per cwt. to Rs. 8-12 per cwt. will also remain effective only till 31st March, 1941 when a further

Tariff Board Enquiry will be undertaken to determine and recommend the extent of protection during the remaining five years. We would not be surprised if, judging from its recent policy, the Government of India further reduce the protection in 1941, for various reasons including the safeguarding of the interests of consumers, and the industry should prepare itself from now for such a contingency. Indeed, we must also observe that a certain section of the industry is in favour of tariff protection being reduced further.

Problems before the Industry

We may refer here to the various important problems which are confronting the industry at present, and to the solution of which, it should, in our opinion, devote its serious attention immediately. Some of these may be stated as follows:—

1. Improvement of the quality of cane and the total yield per acre, and eradication of pests and diseases of cane.
2. Reduction of the cost of production of cane to about 0-3-0 per maund.
3. Development of cane in Reserved areas for factories in the U. P. and Bihar, and in close vicinity of factories in other parts of India.
4. Provision of demonstration farms for cultivation of different varieties of sugarcane, in close proximity to the factories for experimental purposes, and distribution of hardy and healthy seeds of early ripening and late ripening qualities suited for various areas from the factory farms.
5. Large supplies of fresh and rich cane with high sucrose content from areas adjacent to mills which would yield larger recovery, and acquisition of land in the vicinity of factories for research or production of suitable cane.
6. Provision for irrigation of tube-wells, drainage facilities and better roads.
7. Dissemination of knowledge amongst the cultivators regarding manuring, crop rotation, ratooning of the cane-crop, electro culture, suitable fertilisation, modern agricultural implements and methods for combating diseases in the cane crop.
8. Extension of the duration of cane crushing season for factories from 4 months as at present to about 7 months in a year, by development of early ripening and late ripening varieties of cane.

9. Chemical, Technological and Agricultural Research on a comprehensive scale for increasing the recovery percentage of sugar, efficiency of plants for extracting maximum sucrose and the cultivation of improved varieties of sugarcane, and for studying scientific methods of combating and elimination of cane pests.

10. Establishment of a Central Research Institute for U. P. and Bihar for cane development, for testing of seedlings and undertaking breeding work for U. P. and Bihar, as is being done in Coimbatore.

11. Utilisation of molasses, and bagasse in profitable channels.

12. Necessity of good feeder-roads, tramways and aerial ropeways for quicker and cheaper transport of cane and abolition or reduction of Municipal and local taxes in various places on cane carts.

13. Utilisation of the proceeds of the Cane Cess for suitable development of cane in U. P. and Bihar through a representative Committee consisting of representatives of the industry and agriculturists.

14. Regulation of production of cane, and of sugar, from year to year in order to avoid over-production and under-production, as far as possible, in the interest of the stability of the industry.

15. Scientific marketing of sugar and control of sugar prices in a manner which would avoid wide fluctuations from year to year.

16. Evolution of an efficient and scientific Common Sales Organisation which would undertake *direct* sales and distribution of sugar in appropriate quantities in the various markets, avoiding criss-crossing of the traffic and thus economising in freight charges.

17. Regulation for the purpose of preventing over-production of sugar either by restrictions on establishment of new factories, or on extensions to the plants of existing factories or by assignment of quotas amongst all factories in the country, through a system of licensing for All-India.

18. Co-operation of railways and Steamship Companies in reducing freights and grant of other facilities like sufficient supply of suitable wagons for transport of sugar, cane, and molasses etc.

19. Necessity of adoption of a long term policy which would lead to a progressive reduction in the prices of cane and also of sugar

with a view to eliminating the necessity of the present high tariff at an early date.

20. Standardisation of quality of sugar and of improvement therein.

21. Propaganda for increased consumption of sugar by disseminating information about its nutritive qualities, by opening retail shops in suitable areas for selling sugar, by selling products made from sugar at cheap rates in industrial and agricultural areas, by educating people about other industrial uses of sugar and by developing subsidiary industries like the manufacture of confectionery, syrups, cubes, etc.

22. Necessity for vigorous development of cane areas reserved for the various factories in order that factories would receive their complete requirements of cane from such areas within a few years.

23. Necessity of development of cane-co-operative societies for supply, and development of cane, in a manner which would ensure co-operation of factories with them.

24. Provision of adequate storage facilities to prevent dampness and deterioration of the quality of sugar.*

24. Acquisition of other markets like Nepal, Tibet, Afghanistan, Kashmere, Ceylon and Burma for Indian sugar.†

26. Continuance of agitation for being released from the obligations of International Sugar Agreement at an early date, and acquiring of suitable preference in the U. K. market for Indian sugar.

27. Solution of problems created by Indian States *e.g.*, levy of an import duty on Indian Sugar entering in their territory with a view to encourage development of the industry in their area, prohi-

*It is interesting to note that the U. P. and Bihar Sugar Factories Control Rules make it compulsory for any new factory allowed to be established to build storage accommodation for at least one third of the estimated annual production of sugar at the factory.

†The average import of sugar in Ceylon is about 70,000 tons.

Last year no sugar could be exported to Afghanistan owing to high price of Indian sugar. As soon however, as the price of sugar in India is reduced, attempt should be made for exploring the possibility of exporting sugar to Afghanistan. The import of sugar in Afghanistan comes to about 20,000 tons per year, mainly from Java and Russia and consists of superior quality of sugar. Export to Nepal should also be encouraged. As soon as the production of sugar in India is sufficient for her requirements, the Indian Sugar Syndicate should try and find new outlets for Indian Sugar, which has been denied the possibility of export by sea to all other countries except Burma for a period of five years by the Government of India, ending in May, 1942.

bition of import of Indian sugar in their territory in order to encourage import of sugar at ports in their territory, *e.g.*, Morvi State in Kathiawar etc., through diplomatic channels and through the agency of the Central Government etc. etc.

We suggest with all the emphasis at our command that the sole attention of the industry must now be seriously and promptly directed to devising methods for its consolidation on a satisfactory basis by tackling the important problems confronting it, with the requisite energy and will, and by adopting such measures as would lead to efficiency of such a high order that India can emulate the example of the Sugar Industry of Java, Hawaii, and Cuba within a short period, and indeed be able to face world competition before the period of protection to it expires on 31st March, 1946.

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Need for consolidation

The magnificent and rapid development of the Industry which has completely vindicated the policy of protection adopted by the State in this country and which has afforded a measure of satisfaction to all interested in the welfare of the country, would be fully justified however, only when the industry is able to augment its efficiency still further, to reduce the cost of production of sugar to a figure comparable with the costs in other advanced sugar manufacturing countries, and to arrive at a stage when it would be able to stand competition from other countries, with the minimum assistance of the Tariff wall, and at the earliest date.

Looking to the present tendency of the Government of India, the Industry may not expect to receive high tariff protection for a long time to come, and it would be a short-sighted view on the part of the Industry, if it relies on continuance of high protection for a long period. As a matter of fact, the Government of India reduced the protection to the Industry, in spite of the recommendation of the Tariff Board for its continuance for the next seven years, and fixed even such reduced duties, only for a period of 2 years, ending on 31st March, 1941. In view of this, we would not be surprised at all, if after 1941, tariff protection to the industry would be further reduced.

Duty of U. P. and Bihar Governments to look ahead.

It is therefore the duty of the Industry to prepare for this possibility well in advance in order that its position may not be disturbed suddenly owing to such action on the part of the Central Government. It is also the duty of the Provincial Governments of U. P. and Bihar,

particularly, to envisage this possibility of reduction in the quantum of protection in 1941, and to take suitable measures for a reduction in the cost of cultivation in order (1) to enable the industry to continue to maintain its present position in spite of a lower tariff on imported sugar and (2) to enable it to retain its markets in other Provinces which will not be possible if the price of sugarcane and consequently of sugar is kept at a high level.

High prices of cane would certainly ameliorate the condition of the cultivators at the present time, but they will ultimately prove harmful in view of the facts, stated above. We therefore invite the close, careful, and serious attention of the Governments of U. P. and Bihar to this aspect of the matter and to urge upon them the consideration of the necessity of a progressive reduction in cane prices, taking a far-sighted view of the matter, for the purpose of maintaining the position of the industry and cultivators of cane in U. P. and Bihar. There is a very real danger of a stimulus being given to the development of sugar industry in other parts of India, as a consequence of the maintenance of high price of cane, particularly, as U. P. and Bihar depend upon other Provinces for the export of their sugar to the extent of about 75 per cent of their present production. If the importing areas (which now account for the production of about two lakhs tons of indigenous sugar) expand their industry and produce more sugar, it would be very harmful to the industry in U. P. and Bihar, and will mean either the closing down of a few factories or the restriction of production of sugar by all and will adversely affect the cultivators also permanently. It should also not be forgotten that the main advantage of the industry in U. P. and Bihar at present lies in the production of cane at a cheaper rate than other Provinces. If this advantage is sought to be nullified by the fixation of high cane prices, the industry may easily shift to or develop in other parts of India as the result of such artificial stimulus, and this will mean a great blow to the agriculturists in U. P. and Bihar, whose chief money crop is sugarcane.*

*It would be of interest to know that the Canegrowers in Bihar during the season 1937-38 got more than two crores of rupees from vacuum pan factories and four lakhs from open pan factories. Apart from this, *Gur* worth several lakhs of rupees was made. Assuming that one acre of land maintains a family of 5 persons the cane crop of Bihar is the chief money crop for the majority of cultivators. To this may be added the large number of Carters who in an average season cart 35½ lakh cart-loads of cane (one cart capacity 20 maunds) to the factories in five months. Vide Report of the Cane Commissioner, Bihar, for 1937-38 page 15.

The most pressing need of the industry at the present time is the improvement of the quality of cane, the yield of cane per acre accompanied by a progressive reduction in the cost of cane for the factories. It is equally the duty of the industry to increase its efficiency and to bring about a further reduction in the cost of manufacture of sugar. If the industry in U. P. and Bihar wishes to retain its present predominant position in the production of sugar in India, there is no other alternative for it but to reduce the price of sugar to about Rs. 7-8 per maund and thus retain its markets in other parts of the country and incidentally also to eliminate the possibility of abnormally high profits of factories in other Provinces and States, which have no minimum cane prices and other taxes to bear, and thus to reduce the impetus for further development of the industry in those areas, at the present time when the existing factories in India can meet fully the requirements of the country in a normal year.

It is hardly necessary for us to observe here that the ultimate success of the industry will depend to a large extent on the harmony and co-operation amongst the various interests concerned, namely, the industrialists, the cane cultivators, the various Governments, Provincial as well as Central, and the consumers. We fervently hope that in appreciation of the clear, definite, tangible and manifold advantages which flow from the stabilisation of this great indigenous industry, in which about Rs. 30 crores of our capital is invested, to a very large number of Canegrowers, industrialists, technical-men, skilled and unskilled labourers, the public and the country in general, such co-operation will be spontaneously forthcoming, and that as an immediate consequence thereof, the industry will be able to attain a high degree of efficiency and to establish itself on a firm footing at an early date.

Before turning our attention to the problems confronting the industry at present, and to the directions in which its efficiency should be increased, it would be useful and instructive to survey the course of the industry during the last crushing season i.e., 1938-39.

All India Production of sugar direct from cane in 1838-39.

During the 1938-39 season, 139 cane factories were working as compared with 136 during 1937-38 and 137 during 1936-37.* The total number of working factories has increased by 3, 2 having increased in Bengal, 2 in the Indian States, while one factory less

*Burma having been separated from 1st April, 1937, factories working in Burma have been excluded from the year 1936-37 onwards.

worked in Madras. The total production from cane factories which is estimated at 6,50,800 tons is considerably smaller than the production of the previous season estimated at 9,30,700 tons—a fall of about 30 per cent as compared with 1937-38, and of 42 per cent as compared with 1936-37. This has been due to various causes, the chief being scarcity of cane as a result of the reduction in acreage under cane and crop failures over extensive areas in the U. P., Bihar and Bengal, owing to pests, floods and adverse weather conditions. The cane crop as a whole suffered from drought in Meerut, Agra and Rohilkund divisions and from excessive rains and floods in parts of Benares and Gorakhpur divisions. Damage to the crop by red rot was also reported from a large area in the North Eastern districts and by pyrrilla and cane borers from the Sitapur, Hardoi and Kheri districts in the United Provinces. ✓ The season in both Bihar and the United Provinces was a short one, and a majority of factories worked for less than 85 days, on account of inadequate supply of cane. The number of days of actual working during the 1938-39 season is given in the table below.

TABLE NO. I
Working Days of Factories in India.

Particulars	Number of days of actual working.							
	Season 1937-38				Season 1938-39			
	United Provinces	Bihar	All over Provinces	All India	United Province	Bihar	All other Provinces	All India
Maximum ...	181	136	181	181	126	110	184	184
Minimum ...	73	70	37	37	23	43	15	15
Mean ..	124	99	103	112	77	79	97	83

The average number of working days for the whole of India during the season 1938-39 was only 83 as compared with 112 during the previous season.

History of Fixation of cane prices in 1938-39.

The Governments of Bihar and the United Provinces both announced the minimum price of cane during the middle of November 1938 at a high level of 0-6-9 per maund for cane purchased at the factory (or within a radius of five miles therefrom),* at 0-6-6 for cane

*This applies to Bihar only.

purchased at outstations and transported by railway or other means at the cost of the factories for distances exceeding five miles but not exceeding 28 miles, and 0-6-3 for cane purchased at outstations and transported by railway or other means at the cost of the factory for distances exceeding 28 miles. It was further stated in the Government Notifications that these minimum prices were exclusive of the cess on cane which was levied at the rate of 0-0-6 per maund on all sugar cane purchased by the factories throughout the season. The Syndicate entered its emphatic protest against the fixation of such a high minimum price, accompanied by the cess and pointed out that it would give impetus to uneconomic development of the industry in other parts of the country. It was also urged that the Cane Co-operative Societies' commission should not be charged in addition to the cess, but it was of no avail. In view of the rise of price of sugar during the months of November and December 1938, the U. P. Government raised the minimum price of cane further by a notification issued on the 13th January 1939 to 0-7-9 per maund for gate cane in some areas, 0-7-3 in some areas and 0-7-0 in some areas in the U. P. The Association and the Syndicate addressed telegrams to the U. P. Government protesting against their unduly hasty action in raising further the inordinately high cane prices but they were of no avail. The Bihar Government took a more reasonable view of the matter and effected no increase of cane prices till the 12th February, 1939, when they also increased the minimum price of cane to 7 annas for the entire Province. On the 2nd of March, 1939 the U. P. Government raised the cane prices still further in certain areas to 0-8-9 for gate cane, the reason advanced by the Government being that some factories had already been paying as high or even higher prices. The Association urged that fixation of minimum prices should ensure the stability for at least the current season and did not view with favour periodical alterations in cane prices.

Principle of determining cane prices reviewed

The question of the fixation of the minimum prices of cane on the basis of some general principles was considered at a meeting of the Sugar Control Board on the 11th February, 1939, and being invited to express its views, the Sugar Mills Association pointed out the necessity of avoiding wide fluctuations in sugar prices which were caused by variations in cane prices from time to time. The Association also suggested that the minimum price of cane should be fixed on the basis of the cost of production of cane for a long period. They also emphasised the necessity of a progressive decrease in the cost of

cane to the factories. We have referred elsewhere to the adoption of a sliding scale of cane-prices in U. P. and Bihar, from the 1939-40 season.

In the Province of Madras, in the Hospet area, the Government fixed a minimum price of Rs. 9-8-0 per ton (about 0-5-6 per maund) for cane. During the year no deductions were allowed in the minimum price of cane by the U. P. Government, as they did in the previous season.

TABLE NO. 2

Growth of Sugar Industry in India since 1931-32.

Season	Factories Working	Quantity of Cane crushed	Quantity of Sugar produced (Cane Factory Production only)
	No.	Tons	Tons
1931-32	32	1,783,000	158,581
1932-33	57	3,350,000	290,177
1933-34	112	5,157,000	453,965
1934-35	130	6,672,000	578,115
1935-36	137	9,801,000	932,100
1936-37*	137	11,687,000	1,111,400
1937-38	136	9,916,400	930,700
1938-39	139	7,004,800	650,800
1939-40 (Our Est.)	144	9,300,000	850,000

The above table shows the development in the number of factories and the total quantity of cane crushed and sugar produced in factories from the pre-protection period to the present day, and our own estimates for the 1939-40 season. The figures for the production for the season 1938-39 are estimates of the Director, Imperial Institute of Sugar Technology, given in his final Note on the production of sugar directly from cane, in the Indian Trade Journal dated the 7th September, 1939. From our information also, it appears to us that his final estimate of the quantity of cane crushed and sugar produced in factories will turn out to be absolutely correct. The figures for 1939-40 are our own estimates. We have estimated a slightly increased production viz., 8,50,000 tons for the whole of India, as the area under cane is about 11 per cent larger than the previous season and as there is not likely to be such a great shortage of cane as in the previous season. The

*Burma excluded from 1936-37.

production during 1939-40 would have been a little higher had it not been for the fact that the cane crop in U. P. and Bihar was affected by diseases, like red rot, pyrilla etc and had it not been for the inordinately high price of cane fixed by U. P. and Bihar Government, at the commencement. We expect the production in Bombay, Madras and Bengal to be higher than the last season. But we are definitely of the opinion that there will be a small deficit of production in 1939-40, which will have to be met by import of sugar from Java.

Provincial Analysis and Recovery Percentage

As stated in Table No. 1 the cane crushing season of 1938-39 was the shortest on record and particularly so in Bihar and U. P., where the majority of factories worked for less than 85 days. An analysis of the duration of the 1938-39 crushing season shows, that only 25 factories worked for 100 days and over, as against 73 factories in the last season. It may be noted as a matter of interest, that the quantity of sugar produced in the factories in U. P. and Bihar has been much smaller in proportion to the production during the previous season which itself was small, the production of U. P. and Bihar in 1937-38 being 7,56,000 tons as compared with 4,81,000 tons in 1938-39, which works out to about 74 per cent of the total production in India in 1938-39. The fall in the production of the factories in U. P. and Bihar can be illustrated from the results of a few factories.

TABLE NO. 3

Number of working days and total Production of Sugar in a few factories in U. P. and Bihar, in 1937-38 and 1938-39

	No. of days worked		Total sugar produced	
	1937-38	1938-39	1937-38	1938-39
<i>United Provinces</i>				
			Maunds	Maunds
Gauribazar	117	47	1,99,000	52,994
Tamkahi	129	90	2,64,000	1,87,000
Daurala	166	117	3,97,000	3,32,000
Sardarnagar	108	71	6,26,000	3,12,656
Baitalpur	115	66	2,30,000	1,03,487
<i>Bihar</i>				
Dehri-on-sone	110	104	3,69,000	3,33,000
Bihta	118	94	3,18,000	2,00,000
Hathwa	86	87	2,84,000	2,71,000
Marhowrah	80	76	1,93,000	1,62,000
Motipur	88	87	2,31,000	2,27,000

It will be noted with interest that the cane crushing season for the factory in Mysore extends to over nine months during the year. During these nine months from 1st October 1938 to 30th April, 1939 the Mysore factory worked for 191 days and handled 2,31,000 tons of cane. The quantity of cane crushed by the Mysore factory would have been higher but for the fact that considerable tonnage of cane was diverted to the manufacture of jaggery in consequence of the very high price for that product.

There has been a fall in the recovery of sugar in the Bihar and U. P. due to the damaged crop and this is reflected in the fall of recovery of sugar for the whole of India which fell from 9.38 per cent to 9.29 per cent during 1938-39. The highest average recovery obtained for all India was 9.50 in 1936-37. The average recovery for the Mills in Bihar fell from 9.58 per cent in 1937-38 to 9.00 per cent in 1938-39, the recovery for the factories in U. P. fell from 9.18 per cent to 9.14 per cent during 1938-39. The recovery in Bengal fell from 8.89 per cent to 7.45 per cent 1938-39. It was only in the Province of Bombay that the average recovery improved from 10.97 per cent in the previous season to 11.29 per cent during 1938-39.

TABLE NO. 4

*No. of sugar factories in various Provinces, working in 1938-39,
Estimated quantity of cane crushed, sugar produced and
Recovery percentage obtained etc.
(Official Estimates of the Sugar Technologist, published on
7th September, 1939)*

Province	No. of Mills Working	Cane Crushed Tons	Sugar Made	Recovery Sugar per cent cane 1938-39	Recovery Sugar per cent cane 1937-38
United Provinces	69	3,505,400	320,300	9.14	9.18
Bihar	32	1,795,300	161,600	9.00	9.58
Punjab & Sind	3	87,100	7,500	8.62	8.40
Madras	7	245,500	23,000	9.37	9.47
Bombay	7	463,200	52,300	11.29	10.97
Bengal	8	131,100	9,900	7.55	8.89
Orissa	2	8,900	700	7.87	8.17
Indian States	11	768,300	75,500	9.83	9.81
Total (India)	139	7,004,800	650,800	9.29	9.38
Burma	2	220,100	21,800	9.90	9.37

Table No. 4 shows the number of Sugar Mills in India, as well as Burma working during 1938-39, province by province, the estimated quantity of cane crushed and of sugar produced in 1938-39. It also shows the percentage of total production of sugar in each Province, and estimated recovery percentage as compared with the previous season, i.e., 1937-38.

A glance at Table 4 will also show incidentally that the number of cane factories working in U. P. is exactly half of the total number of factories working in India, that the production of sugar in U. P. is very slightly smaller than the total production of sugar in the remaining Provinces and the Indian States put together. Bihar is a good second, having about $\frac{1}{4}$ th of the total number of factories in India and producing 24 per cent of the total sugar produced in the cane factories in the country. Bengal occupies a third place in respect of the number of factories, although its production was less than the production of Bombay which had only 7 factories working. Bombay occupies a third place in the matter of production of sugar, the total production having increased to 52,300 tons as compared with 40,700 tons during the previous season. The factories in U. P. and Bihar, it is of interest to note, produced between them only 74 per cent of the total sugar produced in India during the season 1938-39, as compared with 81 per cent during the previous season.

Growth of the Industry in the Provinces

It would be instructive as well as interesting to follow the growth of the industry in the various provinces of India since the year 1931-32, and to see the rapidity of the development of the industry after the grant of protection in April, 1932.

TABLE NO. 5

Comparative growth of the Sugar Industry in the various Provinces since 1931-32.

Province	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	1939-40 (Est.)
	(No. of cane-factories working)								
U. P.	14	33	59	65	67	68	68	69	72
Bihar	12	19	33	34	35	33	33	32	33
Punjab & Sind	1	1	5	6	4	5	3	3	3
Madras	2	2	4	8	8	11	8	7	7
Bombay	2	1	4	5	6	6	7	7	7
Bengal	2	5	6	6	6	8	9
Orissa	2	2	2
Indian States	4	5	9	8	9	11	12
Burma *	1	1	1	2	2	3	2	2	2
Total for India	32	57	112	130	137	137	136	139	141

*Burma Excluded from 1936-37 onwards from the total for India.

** (Burma included upto 1935-36).

**Burma Excluded from 1936-37 onward from the total for India.

A glance at the Table will show that the most important sugar producing tracts in India are the United Provinces, and Bihar which between them have about 75 per cent of the total number of factories in India. It is somewhat curious that although the tropical area in which conditions are very similar to those in Java and the West Indies would be the principal sugar producing tracts in India, the case is really different. As the figures of the area under sugarcane will show, about 82 per cent of the total acreage of sugar cane is grown in the subtropical area, viz., U. P., Bihar, Punjab, Bengal etc. and about 8 per cent of the acreage under sugarcane is in the tropical area, viz. Bombay, Madras, Mysore, Hyderabad etc. in spite of the fact that in the latter the yield per acre is higher and the quality of cane superior.† It is difficult to explain the reason for the concentration of sugar factories in U. P. and Bihar except the comparatively lower cost of cultivation of cane in the sub-tropical area. This advantage of the fertile soil of the Gangetic plain in U. P. and Bihar which is supposed to be the original home of sugar-cane, has been so great that it has rendered insignificant the natural advantages of the tropical region.*

In view of the fact that the existing factories are able to supply fully the internal requirements of sugar in the country, in a normal season, then is little scope, to our mind, for the establishment of new factories or for that matter even for the extensions of the plants of the existing factories at the present time and under the present conditions. It cannot be concealed, however, that there is prevalent a tendency for encouraging the location of sugar factories in territories which at present import their requirements of sugar from U. P. and Bihar. This tendency is strong, particularly in the Indian States where efforts are being seriously made for developing cane cultivation and for establishment of factories by giving concessions of various sorts e.g., exemption from excise duty for a period of years, imposition of import duty on sugar entering the States, financial help for starting factories, absence of fixation of minimum price of cane, free land, exemption of import duty on machinery, from income tax etc. A few factories are under construction in the States and it appears probable that unless steps are taken through diplomatic channels for discouraging the tendency of establishment of factories in the Indian States by such adventitious aid, no scheme of licensing of sugar factories or of regulating production of sugar in any part of India with a view to prevent over-production would be of much avail. If

†Vide Tariff Board Report, page 20.

and when more factories are necessary for producing a larger quantity of sugar required for our consumption; we feel that such factories should be located outside U. P. and Bihar and in areas which are underdeveloped and which may have special advantages e.g., lower cost of production of cane, availability of *suitable quality* and quantity of cane, proximity to consuming markets etc. If, however, more factories are *now* established in other Provinces and States or extensions are made to their capacities, it will be a serious disadvantage to the factories in U. P. and Bihar which export about 75 per cent of their production to other areas. *The U. P. and Bihar should therefore take the greatest care to see that that possibility does not arise, as in that case the position of the factories in U. P. and Bihar and consequently the agricultural economy in these provinces will be seriously affected.* A change in the territorial distribution of production will work greatly to the disadvantage of exporting areas, and will create a very serious problem, which will have important repercussions. We feel that the time is ripe for calling an All-India Conference, comprising the representatives of the various Provincial Governments, for taking stock of the present development of the Sugar Industry, and of planning measures which would not lead to over-production and thus operate to the detriment of this great national industry working successfully, so far.*

Area Under Sugar Cane

After reviewing the growth of the Industry in the various provinces, we may now turn to the raw material of the Industry, viz., sugar-cane. Official statistics relating to the sugar-cane crop give only the area under cane and the yield of *gur*, no figures of the tonnage of cane being available. Even in respect of acreage of cane, the figures of such Provinces and States where land revenue system makes it essential to undertake a survey and record of the crop raised annually, may be fairly accurate, but in such parts of India where the Permanent Settlement of land revenue is found, their figures are no better than guesses. Thus, for instance, the statistics in relation to U. P., Bombay, Madras and the Punjab are likely to be more accurate,

*We are glad to note that the Government of India, on the recommendation of the Tariff Board, have proposed to call an All-India Sugar Conference in December, 1939, at Delhi.

Also vide Tariff Board Report, page 29.

but this cannot be said of Bihar* and Bengal. While this is the position in respect of statistics of acreage, the position in regard to yield is still worse. At present, all crop-cutting experiments on which official returns of yield are based end in the weighment of *gur* and not of cane. Even these unsatisfactory experiments have now been given up. With the available statistics, therefore, it is hardly possible to calculate the exact figures of the production of cane each year, as the weight of cane produced per acre varies with the locality as well as with the variety of the cane grown. Similarly, the weight of cane required for manufacturing a unit of *gur* also varies with the variety of cane. Thus neither of the two official figures of acreage and yield of *gur* can, therefore, by themselves be used for making an accurate calculation of the total yield of cane. The only recourse therefore for calculating the production of sugarcane is to use the forecast figures of *gur* as the basis.**

The total area under sugar cane in 1938-39 is estimated to be 33,55,000 acres as compared with 38,15,000 acres in 1937-38, 44,40,000 acres in 1936-37, 41,54,000 acres in 1935-36, 36,02,000 acres in 1934-35, 34,22,000 acres in 1933-34, 34,25,000 acres in 1932-33 and 30,77,000 acres in 1931-32. The calculated production of sugar cane in 1937-38 is estimated at 55,637,000 tons, as compared with the official estimates of 67,322,000 tons in 1936-37 and 61,202,000 tons in 1935-36. The area planted under sugar cane in 1939-40 was estimated at 37,31,000 acres as against 33,55,000 acres in 1938-39 or an increase of 11 per cent, over the previous year. The estimated yield of raw sugar for 1937-38 stands at 52,75,000 tons as against 64,89,000 tons in 1936-37.

The following table will show the detailed figures of the acreage and yield of *gur* in the various Provinces in India along with the yield per acre during the last two seasons:

*Vide Footnote in the Statement of Objects and Reasons to the Sugar Factories Control Bill, 1937, given in the "Indian Sugar Industry at a Glance" where it is stated that in the absence of an up-to-date survey, it is almost impossible to obtain reliable estimates of cane areas.

**This question was discussed at a meeting of the Sugar Committee of the Imperial Council of Agricultural Research, but no decision was arrived at for remedying the present position, till July, 1937.

†The estimated area under sugarcane in 1938-39, according to the second forecast of 1939-40 published in October 1939, is 37,31,000 acres, an increase of about 11 per cent as compared with 33,55,000 acres in 1938-39.

TABLE NO. 6.

Acreage under cane and yield of Raw Sugar for all Provinces in India, during 1937-38 and 1938-39

Provinces and States			Area (1,000 acres)		Yield (1,000 tons)		Yield per acre (lbs.)	
			1938-39	1937-38	1938-39	1937-39	1938-39	1937-38
United Provinces (a)	1,635	2,222	2,182	3,194	2,989	3,220
Punjab	352	510	225	389	1,432	1,709
Bihar	.	..	375	360	369	379	2,204	2,358
Bengal	299	290	439	483	3,289	3,731
Madras	97	98	261	279	6,027	6,377
Bombay (a)	109	111	261	272	5,304	5,489
North West Frontier Province	53	70	59	73	2,404	2,336
Assam	37	39	37	40	2,240	2,297
Orissa	32	34	62	74	4,340	4,875
Central Provinces and Berar	..	.	31	34	48	51	3,468	3,360
Delhi	1	6	(b)	4	1,120	1,611
Sind	6	7	14	14	5,227	4,480
Hyderabad	29	30	64	60	4,943	4,480
Mysore	45	50	57	74	2,837	3,315
Bhopal (Central India)	5	5	5	5	2,240	2,240
Baroda	2	3	7	9	6,253	5,760
TOTAL	3,108	3,869	4 090	5,4 0	2,948	3,126

(a) Including Indian States.

(b) 500 tons.

The area under improved varieties of cane in the different provinces showed a remarkably rapid rate of increase up to 1936-37 since when it has fallen a little along with the fall in the acreage. The following table shows the total area under sugar cane, the area under improved varieties, the gross production of *gur* and the calculated production of sugarcane from 1931-32 to 1938-39.

TABLE NO. 7

*Acreage under Sugar-cane, under improved Varieties, Production of Cane per Acre, Gross production of Gur, and Calculated Production of Cane-crop.**

Year	Total acreage under sugarcane in thousand acres	Acreage under improved varieties in thousand acres	Average cane production per acre (In tons)	Gross production expressed as gur (In thousand tons)	Calculated production of sugar cane (10-11 factors) (In thousand tons)
1930-31	2,905	817	12.3	3,359	35,780
1931-32	3,076	1,170	14.1	4,110	43,316
1932-33	3,425	1,845	14.9	4,859	51,129
1933-34	3,422	2,295	15.3	5,055	52,455
1934-35	3,602	2,433	15.1	5,292	54,346
1935-36	4,154	3,056	15.3	6,102	61,202
1936-37	4,582	3,452	15.6	6,704	67,322
1937-38	3,869	2,968	15.5	5,452	55,637
1938-39	3,108	2,424	15.0	4,090	—
1939-40	3,731	—	—	—	—

In addition to the area for which particulars are given above, the crop is grown on a small scale in certain other tracts in India, the average area of which for the last 5 years has been some 1,40,000 acres with an estimated production of 1,84,000 tons of *Gur* (Raw sugar).

The percentage of the sugarcane area under the various tracts to the total area under cane in India in the year 1939-40 is given below.

United Provinces	53%
Punjab	12%
Bihar	10%
Bengal	8%
Bombay	3%
Madras	3%

Improved Varieties of Cane.

It will be obvious that the area under improved varieties in the various provinces in the year 1937-38 came to about 64 per cent of the total area as against 65 per cent in 1936-37, 74 per cent in 1935-36, 66 per cent, in 1934-35 and 36 per cent in 1931-32. Comparatively, the largest percentage of the area under improved varieties of cane

*The total acreage in U. P. is estimated at 2,062,000 and in Bihar 466,000 during 1939-40. *Vide*, Second Sugar cane forecast, October, 1939.

was found in U. P. where in 1937-38, 19,32,000 acres were reported to have been planted with improved varieties of cane estimated to yield 28,92,000 tons of *gur*, as compared with 22,63,000 acres in the year 1936-37 estimated to yield 34,466,000 tons of *gur*. It is also satisfactory to note that the production of cane per acre has gone up *vide* Tariff Board Report page 18, due to the increased cultivation of improved varieties of cane. This has been responsible for improving the yield of cane per acre from about 12.3 tons in 1930-31 to 15.6 tons in 1936-37.

Decline in area under cane.

For the first time, since the pre-protection year, i.e., 1931-32, the area under sugarcane witnessed a reduction in the year 1937-38. This is due to some extent to the fact that the supply of cane in the 1936-37 season was far in excess of the demand and some quantity of cane had to be allowed to run to waste in spite of the prolongation of the working season by factories. This bumper crop of cane in 1936-37 accompanied by a reduction in the minimum price of cane later in the season by the Government led to apprehensions in the minds of cultivators about the future price of cane. This factor as well as the fall in the price of *gur* may be said to be responsible for the sowings of alternate crop by the cultivators and the reduction of the area under cane. (In the 1938-38 crushing season, the supply of cane to factories in Bihar was greatly restricted, as observed before, and on this account the majority of factories could only work for about 85 days during the season). The fluctuations in the acreage under sugarcane are due partly to conditions of rainfall during the period of plantations, the prevailing price of sugarcane, the price of *gur*, as also of the prices of alternate crops, and the prospects of the price of cane in the next season*

In U. P. the crops suffered from drought in the Meerut, Agra, and Rohilkund divisions and from extensive rains and floods in parts of Benares and Gorakhpur divisions and a few divisions in Oudh. Damage to the crop by red rot was also reported from a large area in the North Eastern districts and by pyrilla and cane borers from other districts. For the Province as a whole in 1938-39 the yield has been estimated at 71 per cent. of the normal as against 77 per cent. last year. In Bihar the yield for the 1938-39 season was expected to be 83 per cent of the normal as against the past ten years' average of

*In his reply to a question in the Assembly on 24th February, 1939 Sir Girja Shankar Bajpai observed: "It is impossible to assign precise reason for the fall in area but it has been suggested that this might be due to the continued effect of the low price for cane paid by factories in March and April, 1939, the low fixation of price for the 1937-38 crushing season and the low price of *gur* in 1938."

96 per cent. In the Punjab, the season was not favourable owing to scarcity of rains and the crop was damaged by insects and pests. In Bengal the crop was affected by drought and also by heavy rains and floods in some places. In the Deccan, the crop progressed well except at places in the South where it suffered in its early stages from stem borders and tip burn.

Improved quality of cane essential for prosperity.

It is hardly necessary for us to emphasise that the prosperity of the sugar industry in India depends to a great extent on the availability of disease-free cane of good quality with plenty of sucrose and of early and late ripening varieties, in order that factories may be able to extend their crushing season from the present short period of about 4 months to at least 7 months. It is equally necessary to check the disease and pests which reduced the sucrose content by as much as 40 per cent. in some areas, and until this is done it would be impossible to obtain a larger recovery. A diseased crop of cane means a loss both to the manufacturer and also to the agriculturists engaged in the cultivation of cane. While, no doubt, efforts have been made to improve the quality of cane during the last seven years, it will also be agreed that a lot more remains to be done, particularly in the direction of educating the cultivator to adopt modern methods of cultivation, to get better seeds, pay more attention to manuring, to check insects, pests, and diseases, to check ratoons etc. We have discussed this question in detail in the succeeding pages in order to invite the attention of all concerned to the necessity of controlling the damage done to the crop by insects, and absence of manuring, and irrigation.

Duration of Crushing Season in 1938-39 in All-India.

An analysis of the estimated duration of the crushing season by the Director, Imperial Institute of Sugar Technology, (*vide* The Indian Trade Journal dated the 7th September, 1939), shows that the average (mean) number of days on which the factories crushed cane in 1938-39 was 83, as against 112 in 1937-38 138 in 1936-37 and 126 in 1935-36. It should easily be possible for the industry to increase the length of the working season to a fair extent if attention is concentrated in that direction.

Fair Average duration of crushing season.

The average number of days worked in sub-tropical area, according to the Tariff Board Report (*vide* report page 66) was 108, 128, and 139 for the years 1934-35, 1935-36, and 1936-37, and 122, 135, and 132 for the tropical area. The area 1936-37 was an abnormal year. The Tariff Board concludes that 130 days is a fair average for the whole of India which should be adopted as an economical period

of working in present conditions. The Tariff Board further observed that the duration of the season is dependent on the availability of raw material, and the economic operating purity of the cane supplies. We hope that under no circumstances will the duration of the season be curtailed for the factories to a period lower than 130 days as in that event the cost of manufacture will be considerably be raised.

Uses of Cane.

We have seen above that the estimated total production of sugarcane in 1938-39 was about 47,000,000 tons whereas the total quantity of cane estimated to have been crushed during this season by sugar factories was only about 7,004,000 tons, or about 15 per cent. of the total crop. The quantity crushed for *gur* manufacture was roughly about 4 times the quantity crushed in the factories, thus representing about 60 per cent. of the total crop. During the year 1937-38, the total quantity of sugarcane crushed by the sugar factories was 9,916,400 tons while the estimated tonnage of the total crop of cane was 55,637,000. There has thus been a considerable reduction in the quantity of cane crushed in the sugar factories during 1938-39 as compared with the previous season.

It will be interesting to see the different uses to which the cane crop is put. The following table shows the various uses of cane along with the percentage of each of the total production for the last six years:

TABLE NO. 8

*Percentage of Cane used under different heads during the years
1932-33 to 1938-39
(November-October)***

	1932- 33	1933- 34	1934- 35	1935- 36	1936- 37	1937- 38 (Our Est)	1938- 39 (Our Est)
Cane used in factories	6.5	9.8	12.3	16.0	17.6	17.8	15.00
Cane equivalent of <i>gur</i> used in refineries	3.0	2.0	1.2	1.4	0.5	0.5	—
Cane used for <i>gur</i> manufacture	64.7	65.5	66.0	63.8	64.9	62.0	—
Cane used for other purposes, including <i>Khandsari</i> , Chewing, setts for planting etc.	35.8	22.7	20.5	18.8	16.9	19.7	—
Total percentage	100	100	100	100	100	100	100

* *Vide* Trade Journal, 7th September, 1939.

** *Vide* Reply in the Assembly to Question No. 807, dated 7th March, 1939.

† Excluding Burma.

It is of interest to note however that the total percentage of cane crushed in factories in U. P. and Bihar in relation to the total cane produced in these Provinces is different. We give these statistics below for the four years, ended 1937-38. Figures for 1937-38 are our own estimates.

TABLE NO. 9

Percentage of cane crushed in factories to the total cane-crop in respective Provinces.

Season	U. P.	Bihar	Bombay	Bengal	Madras	India
1934-35	13.2	30.9	8.0	2.7	5.0	12.3
1935-36	16.3	40.4	11.7	4.8	5.4	16.0
1936-37	15.6	49.3	13.0	5.2	6.0	17.6
1937-38	(Our Est) 16.9	43.1	14.0	17.8

These figures will show in a correct perspective the importance of the cane-crushing factories in the agricultural economy, particularly in Bihar. So far, this fact has not been fully appreciated, owing to these statistics not being brought to the notice of all concerned, prominently. It must be noted that in some districts where there is a congestion of factories, 60 to 70 per cent. of the cane is crushed by factories, both in the U. P. and Bihar.

Production of Sugar by Khandsari and from Gur.

Refined sugar is made by three different processes in India, viz (1) direct from cane from modern vacuum pan factories, (2) from cane by indigenous open pan factories i.e., *Khandsaris* (through the intermediate process of *Rab*) and (3) from *gur* refined in modern refineries.

We have already referred to the production of sugar by the first method, i.e., direct from cane in 1938-39. In regard to the production of sugar by *Khandsari*, we have no definite and reliable statistics* but on the basis of the reports of the increasing operation of the *khandsaris*, particularly in the United Provinces whose production is estimated to be about 60 per cent. of the total *khandsari* sugar production in India, (there is no *Khandsari* Industry in Bihar), we estimate that the production of *Khandsari* sugar during the year 1938-39 will be 1,25,000 tons, which is equal to the estimated production of the previous season.

In this connection it might be of interest to observe that although the estimated production is so large, the figures of the amount of the Excise duty collected during the last four years would point to a very small production. The total amount of excise duty collected from the production of khandsari sugar in 1934-35 was Rs. 77,000, in 1935-36 Rs. 60,000, 1936-37 Rs. 47,000, in 1937-38 Rs. 51,000 and in 1938-39 Rs. 59,000. The Budget estimate of the revenue from the excise on khandsari sugar during 1939-40 is Rs. 6,00,000 as a result of the change made in the definition of "factory" in section 2(a) of the Sugar Excise Duty Act, 1934, so as to omit any reference to the number of workers employed. The Hon'ble Finance Member observed in his Budget speech in February, 1939, (*vide* The Sugar Industry at a Glance), that although the estimated quantity of khandsari sugar produced annually in British India has at various times fluctuated from 1,00,000 tons to upwards of 2,00,000 tons, the yield of excise duty at the present rate of Re. 1/- per cwt. was not more than Rs. 50,000; in other words the quantity of khandsari sugar on which duty was paid was less than 2 per cent. of the total production. He also observed that the khandsari avoided his liability to the payment of excise duty by the common practice of splitting up the process of manufacture and having the different processes performed in separate premises, as the charge of the excise duty was confined to sugar produced in premises employing 20 or more workers. The result was not only a loss of revenue but an inequitable incidence of taxation which gave rise to numerous complains from the sugar mills of unfair competition. Accordingly, the definition of "factory" was amended so as to omit any reference to the number of workers employed. The Finance Member also made it clear that no extra burden would be imposed on the small agriculturist who did not employ mechanical power in any of the processes of sugar production. At the same time the rate of excise duty was reduced from Re. 1/- per cwt. to -|8|- per cwt. The Finance member estimated that this change would yield an increase revenue of approximately Rs. 5½ lakhs. The reduced excise duty came into effect from 28th February 1939.. It is clear that in accordance with the excise duty realised from Khandsari sugar, the quantity of sugar produced by khandsari would only be of the order of about roughly 4000 tons per year. About 60 per cent. of the total khandsari sugar production is in U. P., the rest being in open ~~pon~~ factories in Bombay, Bengal etc. If the excise duty on the entire estimated production of khandsari sugar (1,25,000 tons in 1939-40) is realised the Government of India should receive an amount

of not less than Rs. 12,50,000. According to the Government estimate, about 60,000 tons of Khandsari sugar will pay excise duty in 1939-40.*

Definition of Khandsari Sugar.

Under the Sugar Excise Duty Act, excise duty is levied on Khandsari sugar (i.e., sugar in the manufacture of which neither vacuum pan nor vacuum evaporator is employed) under Section 3(1) of the Act.

It would be of interest to note that 'sugar' for the purposes of this Act means any form of sugar containing more than ninety per cent of sucrose, and in order that the sugar may be taxable it must be produced in a factory* which means any premises in any part of which any manufacturing process connected with the production of sugar is being carried on or is ordinarily carried on, with the aid of power. The sugar produced by the purely agricultural section of the Open Pan Sugar Industry where work is carried on without the aid of power is not liable to Excise Duty. Similarly, products like Gur and Rab which do not contain 90 per cent of sucrose are not liable to the Excise Duty. It is well-known that several small-sized vacuum pan

*It is a matter of regret that statistics of production of sugar by indigenous processes (collectively called Khandsari) are not available. The Imperial Council of Agricultural Research happily realised the great importance of such statistics and sanctioned a grant in November, 1933, for taking a census of sugar produced by Khandsaris. At the instance of the Imperial Council of Agricultural Research, the Governments of U. P. and Punjab undertook to collect such figures for their respective provinces and we understand that during the year 1933-34 according to this enquiry, 86,000 tons of sugar were manufactured by Khandsari in U. P. and 4,000 tons in the Punjab. The production by Khandsari went on slowly decreasing since 1933-34 when it was estimated at 2 lakhs of tons, to 1,50,000 tons in 1934-35, 1,25,000 tons in 1935-36 and 1,00,000 tons in 1936-37, as a result of the competition of Vacuum Pan factories and the imposition of excise duty with effect from 1934 on Khandsari sugar at the rate of 10 annas per cwt. up to February 1937, and Re. 1 per cwt. thereafter. During the year 1937-38, however, the production has again increased and in 1938-39, and 1939-40, we expect it to be the same.

The rate of excise duty on *khandsari* sugar which was 0-10-0 per cwt. from 1st April 1934 to 27th February, 1937, was increased to Rs. 1-5 per cwt. from 28th February, 1937. It was reduced in April, 1937, to Re. 1 per cwt. with retrospective effect from 28th February, 1937. From 28th February, 1939, the excise duty on *khandsari* sugar was reduced to Annas 8 per cwt. but along with it the definition of Factory in the Sugar Excise Duty Act 1934 was also amended with a view to make a larger quantity of *khandsari* sugar liable to the excise duty.

*The definition of 'factory' was amended by Clause (3) of the Indian Finance Act, 1939, and any reference to the number of twenty or more workers was omitted. (For the amended definition, see page 8 in the 'Sugar Industry at a Glance').

concerns manufacturing Khandsari sugar were in order to avoid the Excise Duty, so adjusting their business that they would not come within the provision of the definition of a 'factory'. With effect from 28th February, 1939, however, under the amended definition of 'factory', they will be liable to Excise Duty at the rate of 0-8-0 per cwt.

Sugar refined from Gur.

The third method of making sugar is by refining it from gur. Apart from 10 refineries throughout India, about 50 out of the modern cane factories have got gur refineries plant, although only seven of them actually refined sugar in the off-season of 1937, due to the high cost of the double process of extracting sugar from cane. The average recovery of sugar from 100 tons of gur has been 60 to 67 tons.. The manufacturing expenses for a maund of sugar in a refinery may be taken roughly at about Rs. 1-8-0 per maund. The cost of sugar refined from gur depends largely on the price of gur which however bears no close relation to the price of sugar; consequently refining of sugar from gur becomes a speculative proposition. Only 10 factories were refining gur in the year 1938, five being pure refineries and the other three being cane sugar factories refining gur in the off-season. Of these seven were in Madras, 2 in the U. P. and only one in Bihar. The year 1933 was a peak year for the production of sugar from *gur*. Since the beginning of 1934, however, *gur* refining has begun to prove unprofitable and there has been a decline in the production of sugar refined from *gur* since that year as will be seen from the following table, which also shows the recovery of sugar, and of molasses per 100 tons of cane.

TABLE NO. 10
Production of Sugar and Molasses in India by Gur-Refineries.

Particulars	1934	1935	1936	1937	1938	1939 (Est)
Number of Gur refineries operating ...	16	13	13	9	10	10
Gur melted tons ...	1,07,263	67,613	87,472	32,000	26,700	25,900
Sugar Manufactured tons	61,094	39,103	50,067	19,500	16,600	15,600
Molasses obtained tons	39,700	21,335	32,556	10,100	8,800	7,100
Recovery of sugar per 100 tons Gur ..	56.96	57.83	57.23	60.94	62.17	60.00
Recovery of Molasses per 100 tons Gur ...	37.07	32.44	37.21	31.56	32.95	27.40

The inferior quality of *gur*, the fairly high price of *gur* and the higher manufacturing cost of refining sugar are responsible for a decline in the output of sugar during 1938. The Director of the Imperial Institute of Sugar Technology estimates the sugar production from this source for the current year 1939 (which is to be added to the production of cane-sugar for 1938-39) at 15,600 tons only, the

number of factories expected to work during 1939 being 10.* We feel that there is little possibility of there being any increase in the production of sugar refined from *gur* in refineries during the year 1939, although the production of refined sugar which, incidentally, is equal to the lower grade crushed factory sugar, is sold at about annas four per maund higher than factory sugar because of its superior sweetening qualities and public demand.

Total Production and Import of Sugar in India in 1938-39.

We may now turn to the statistics of sugar from all sources. The following table gives the *total* production of sugar in India

TABLE NO. 11

Number of Cane factories working in India, including States, and Production of Sugar from Cane Factories, Gur Refineries, Khandsari; Net Import of Sugar in British India and Import in Kathiawar Ports during the last 8 years, and estimates for 1939-40

Year (November October)	No. of cane factories working in India	Cane Factory Production (November- October)	Sugar Refined from Gur (January- December)*	Khandsari (Con- jectural estimates) (Nov.-Oct.)	Total Production of sugar in India (Nov.-Oct.)	Net Import (Excluding Re- exports) of Sugar in British-India (Nov.-Oct.)	Import of Sugar in Kathiawar Ports (Nov.-Oct.)
		(Tons)	(Tons)	(Tons)	(Tons)	(Tons)	(Tons)
1931-32	32	158,581	69,539	250,000	478,120	438,797	92,678
1932-33	57	290,177	80,106	275,000	645,383	321,081	68,649
1933-34	112	453,965	61,094	200,000	715,059	233,366	87,094
1934-35	130	578,115	39,103	150,000	767,218	197,775	113,364
1935-36	137	932,100	50,067	125,000	1,107,167	86,962	45,218
1936-37†	137	1,111,400	19,500	100,000	1,230,900	11,960 ‡	12,870
1937-38	136	930,700	16,600	125,000	1,072,300	9,410	12,284
1938-39*	139	650,800	15,600	100,000	7,66,400	254,340	68,672 (11 Months)
1939-40**	144	850,000	12,000	100,000	9,62,000	75,000	15,000

*Of these 2 are in the United Provinces, 7 in Madras and 1 in Bihar. Out of the above ten factories 5 are pure refineries. The three cane sugar factories refining *gur* in the off-season are situated in Madras and Bihar. The output of *gur* factories in Madras is over 12,000 tons. The recovery has fallen due to the poor quality of jaggery.

Gur refining being inefficient and wasteful is gradually decreasing.

*Figures of *gur* production for calendar year 1932 are added to figures for 1931-32, and so on.

**Our estimates.

†Factories in Burma, and production of sugar in Burma, are excluded from 1936-37 season.

‡Imports in Burma excluded from April, 1937 onwards.

separately from all sources for the last 8 years, of imports of sugar into British India and in Kathiawar Ports and of the estimates of production, imports etc. for the next season i.e., 1939-40.

For convenience of reference, we are giving, beginning from 1938 Annual, the figures of imports from November-October as in the case of figures of production of sugar in India. ✓

Importance of Sugar Industry in the National Economy.

The above figures of production will show the great importance of this industry in India at the present time. In this connection, it is of interest to note that this Industry is now the second largest industry in India, the Cotton Textile Industry being the largest,* owned, managed and controlled by the nationals of the country. Apart from that, the prosperity of about 20 million agriculturists is also bound up with the prosperity of the sugar industry.† Taking into consideration these facts and also that the development of the Industry has enabled the country to stop the huge annual drain of Rs. 16 crores to foreign countries, by producing increased quantities of sugar within the country itself with such rapidity, it is absolutely essential to create conditions whereby there may be no more imports of sugar into the country, particularly as it is now able to produce the full quantity required for consumption in India at the present time.

Consumption of Sugar.

The present annual consumption of sugar in India is roughly estimated by us at about 11 lakhs of tons per year (our *per capita* consumption is very small as compared with most of the other countries of the world as a perusal of the table in "The Sugar Industry at a Glance" will show). This consumption, however, is not steady and varies from year to year with the rise and fall in the price of sugar, with the changes in the economic condition of the people in the

*The Cotton Industry comes first with about 400 cotton mills, employing about 4 lakhs workers, and a capital of about Rs. 42 crores, and the sugar Industry ranks second, with about 150 mills, and a labour force of over 1 lac persons. Vide Mr. M. P. Gandhi's "The Indian Cotton Textile Industry Annual, 1939, with a foreword by The Hon'ble Dr. K. N. Katju, Minister for Development and Justice, U. P. 200 pp.

†The quantity of cane crushed in factories in 1937-38 was 9,916,400 and in 1938-39, 7,004,800 tons. At an average production of 15 tons per acre, this gives an acreage of 6,61,100 and 446,000 respectively under cane wholly fed by the factories. On the basis of one acre representing the area grown by a family of 5 members, the mill industry maintained on the fields 33 and 23 lakhs people, respectively. To this must be added such additional hired labour as is employed in weeding, harvesting, transport etc.

country and with the growth of the population. (For detailed information regarding price level and consumption of Sugar in India, *vide* Mr. M. P. Gandhi's "Indian Sugar Industry--Its past, present and future, 1934, pp. 382). But we would not be far out, if we estimate the annual consumption of sugar in India in 1938-39 to be only 9¾ lakhs of tons, owing to the abnormal rise in price of sugar, as compared with 11½ lakhs tons in 1937-38. According to the Director of the Imperial Institute of Sugar Technology, the consumption of sugar during the period 1st November, 1936 to 31st October, 1937 was 1,167,000 tons as against 1,074,000 tons during the preceding period of a year.

The Table on the next page gives details re: sources of supply of sugar required for consumption in India during the last 8 years, i.e., from 1930-31 to 1938-39. The figures for 1938-39 are our estimates.

We give below a table showing the *per capita* consumption of sugar in a few other countries of the world. This will show how small our consumption of sugar is at present and the large possibility of an increase therein.

TABLE NO. 12

Per Capita Consumption of Sugar in other Countries in 1936-37.

Great Britain†	110.9 lbs. per head
U. S. A.†	102.4 " "
Netherlands	55.8 " "
France	54.8 " "
Australia	117.4 " "
Germany‡	59.7 " "
Cuba‡	88.0 " "
Java‡	11.2 " "
Japan	25.8 " "

†Great Britain and U.S.A. import to meet their requirements.

‡Germany, Cuba, and Java have surplus for export.

TABLE NO. 13
Sources of supply of Sugar required for Consumption in India.*
(November-October) from 1930-31 to 1938-39.

PARTICULARS	1930/31	1931/32	1932/33	1933/34	1934/35	1935/36	1936/37	1937/38	1938/39
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Initial Stock :									(our Est)
(1) In Ports	37,100	31,510	19,176	9,057	21,630	11,189	23,684	22,000	20,000
(2) In principal Land markets	8,366	7,994	5,330	15,000	15,000
(3) With factories	4,000	130,300	170,000	67,000
Production of Sugar :									
(a) Direct from cane	119,859	168,581	290,177	453,965	578,115	932,100	1,111,400	930,700	650,500
(b) Refined from Gur	23,700	61,990	77,995	64,890	43,500	47,876	23,600	1,200	12,200
(c) Khandasaris	200,000	250,000	275,000	200,000	150,000	125,000	100,000	125,000	...
Imports of Sugar by Sea	697,621	443,200	324,400	245,300	200,100	93,800	16,001	8,986	254,400
Imports of Sugar by Sea into Kathiawar Ports	114,758	93,000	64,000	87,094	113,400	45,200	12,870	12,238	90,600
TOTAL SUPPLY	1,199,038	1,085,281	1,050,748	1,060,306	1,115,111	1,263,159	1,424,865	13,01,124	11,10,000
Re-Export of sugar by Sea	3,691	4,414	587	11,900	2,157	6,206	5,533	131	2,000
Export of sugar by Sea	268	382	3,356	434	357	449	10,640	8,668	7,000
Export of sugar by Land	36,876	32,000	31,957	30,607	29,939	27,667	35,064	31,100	30,000
Closing Stock :									
(1) in ports	37,600	19,176	9,057	21,630	11,189	23,684	22,000	20,000	80,000
(2) in principal inland markets	7,994	5,330	15,000	15,000	...
(3) with factories	4,000	130,300	170,000	67,100	25,000
Total to be deducted	78,435	55,972	44,957	64,571	51,636	193,336	238,237	141,899	144,000
Quantity consumed to the nearest thousand	1,121,000	982,000	1,006,000	996,000	1,059,000	1,074,000	1,167,000	1,159,000	966,000
									(Our Estimate)

* *Vide* The Review of the Sugar Trade of India, for the year 1937-38, published with the Indian Trade Journal, dated 2nd November, 1939. For statistics of production, imports etc. for 1938-39 see previous tables.

The Director of the Imperial Institute of Sugar Technology remarks that in calculating figures in the above table no allowance has been made for the difference between initial and closing "invisible" stocks in the interior markets. The imports of sugar into India across the land frontiers of French and Portuguese Settlements have also not been taken into account. He states, however, that the difference on account of these two factors would be of negligible magnitude.

A glance at the figures of production will show that during the year 1935-36 the internal production of sugar from all sources exceeded the estimated consumption in 1935-36 by about 23,000 tons and in the years 1936-37 by about 63,000 tons. During the year 1937-38 and 1938-39 the estimated production is only about 1,072,300 tons and 7,66,400 tons which is much smaller than the production in the previous years, due to the considerable curtailment in the cane crushing season and the shortage of the cane crop.

A glance at the table will also indicate that there was a great shortage of Indian production during the year 1938-39 which rendered it necessary to import sugar from foreign countries to the extent of 2,80,000 tons in order to meet the deficit between the indigenous production and consumption during the year. During the last two years the import of sugar from foreign countries was rendered almost unnecessary and it is a matter for regret that owing to bad cane crop for two consecutive years, the Indian production has been reduced to such an extent that it has been necessary to depend upon other countries once again for meeting the requirements of sugar partially.

As we have observed before, it is hardly necessary for India to import sugar in a normal season as the potential capacity of our factories is large enough to supply not only the quantity required for our internal consumption but indeed also a little more.

We feel apprehensive looking to the condition of the cane crop for the next season, which has suffered generally from deficient rains and which has also been affected by insects and diseases that even during the 1939-40 season the production of Indian sugar from all sources will fall short of her normal requirements, and it will be necessary for India to import about 75,000 tons of sugar from foreign countries. We fervently hope, however, that 1939-40 will be the last year in which India will have to depend upon foreign countries like Java for supplying the balance of the sugar required by her. The necessity of foreign imports of sugar has also been the cause of a considerable rise in the price of sugar as the price at which Java sugar has been landed has been considerably higher than the price of Indian sugar.

Publication of Tariff Board's Report.

We referred in the last two Annuals to the appointment of the Tariff Board Enquiry by the Government of India to ascertain if protection to the Sugar Industry during the period from 31st March 1939 upto 31st March '46 should be continued to the same extent or to a greater or lesser extent. The report of Tariff Board was submitted to the Government in December '37 but its publication was withheld pending the examination of its recommendations by the Government of India, and the report was published only on 30th March 1939. During the year 1938, the Government of India continued the protection to the Industry for a period of one year by the Sugar Industry Protection (Temporary Extension) Act, 1938 up to 31st March 1939. On the 30th March, 1939, the Government of India published the report of the Tariff Board and along with that they also published a resolution examining the various recommendations of the Tariff Board and proposing introduction of legislation for fixing the amount of protection to the industry for a period of two years, from April 1, 1939 to 31st March 1941 at a rate of Rs. 8-12 per cwt. (i.e., at a rate lower by -|8|- than the present rate of Rs. 9-4 per cwt). The Government observed that the comparatively high prices ruling for Java sugar support the view that this modest reduction in the protection will still leave the indigenous industry adequately protected. The Government also observed, in the course of the Resolution, that a further investigation will be held in 1940 in time to enable a decision to be made as to the quantum of protection to be granted to the industry for the remaining five years from April 1, 1941.

The Government also criticised adversely the recommendations of the Tariff Board in respect of the necessity of lowering the excise duty and in respect of the detailed calculations by which the Board arrived at its estimate of the fair selling price of sugar and the 'orthodox lines' on which the Board proceeded in taking a difference between the estimated 'fair selling price' of indigenous sugar and the landed price of imported sugar as the measure of protection required by the industry. The Board found the fair selling price to be Rs. 7-11-10 per maund and the landed price to be Rs. 2-7-0 per md., the difference being Rs. 5-4-10 or Rs. 5-5 in round figures per md. and it came to the conclusion that Rs. 5-5 per md. equivalent to Rs. 7-4 per cwt. (which was the existing protection given to the industry) was required for the remaining 8 years of the period of protection. For the reasons given in the Resolution (published in the "Sugar Industry at a Glance"), the Government of India turned down this recommendation and reduced the protection by -|8|- per cwt., and

what is more, fixed the protection for a further period of *two years only*.

The Government also observed in the course of the Resolution that they had not found time to examine the various proposals of the Tariff Board which covered a wide field and which necessitated consultation between the Central and Provincial Governments and with the various interests concerned. It is a matter for surprise that the Government could not find time to consider the Tariff Board's proposals although a period of no less than 15 months elapsed between the date of the submission of the report by the Tariff Board and the publication of their Resolution on the subject.

Criticism of "Orthodox" Method of estimating quantum of protection.

Apropos the decision of the Government of India, for reducing the quantum of protection by annas 0-8-0 per cwt., we find that no serious objection can be taken to the proposal but we do feel that the Government of India were hardly justified in their comment on the Tariff Board's report wherein they have observed that the Board have proceeded on *orthodox* lines in taking the difference between the estimated fair selling price of indigenous sugar and the landed price of imported sugar as a measure of protection required. This, according to our view, is the accepted method on which practically all Tariff Boards have computed the measure of protection, and we wonder what the more acceptable and "unorthodox" method approved of by the Government of India would be. It would have been instructive if the Government of India had given some more details in this connection for the future guidance of the Tariff Board as also of the various industries which should be apprised of the correct method of calculating the measure of protection required. In this connection, we must also observe that the reduction of the import duty on sugar by annas 0-8-0 per cent. appears to us to be just arbitrary and not based on any acceptable scientific reasoning.

When the Government's proposal, for lowering the import duty on sugar with effect from 1st April, 1939 was published, we observed that the Government should have postponed enforcing of the Import Duty at a lower level of Rs. 8-12 per cwt. to November 1939 as that would have prevented a loss of revenue of about 20 lacs of rupees to the Government, inasmuch as about 2 lakh tons of sugar, had, according to our estimate, to be imported for meeting the deficit of Indian production as compared with the estimated consumption during the year 1938-39. But the Government unnecessarily sacrificed this revenue.

Undeserved criticism by the Government of Tariff Board's Recommendation Re: Reduction of Excise Duty.

We greatly regret to find that the Government of India have made very undesirable comments on the recommendations of the Tariff Board for a reduction of the excise duty. They have said that this subject does not fall within their purview and is outside the scope of their review. We confess we do not see eye to eye with the Government on this observation. The effect of the excise duty on the industry is certainly a matter which falls within the scope of the Enquiry and we cannot help coming to the conclusion that such remarks by the Government of India on such a responsible body like the Tariff Board are very undesirable and unwarranted. We cannot also help feeling that such remarks against the Tariff Board appear to have originated more due to anger at the inconvenience of their recommendations which the Government have found very difficult to turn down. But with such views of the Government of India on the subject of the excise duty, the industry need not entertain any hope of any reduction in the excise duty at least in the near future, although the incidence of the duty per maund of sugar works out to about 25 per cent.

Our recommendations found acceptable by Tariff Board.

It is a matter of considerable pleasure to us to observe that most of the suggestions made by us in the course of our representations to the Tariff Board and through the Sugar Industry Annuals have been found acceptable by the Tariff Board, particularly those recommending the continuance of protection at the present level for a further period of 8 years, reduction of excise duty, permission for the manufacture of power alcohol from molasses, larger expenditure on research work by allotment of annas 0-3-0 per cwt. from the Excise Duty etc.

It has also given us great pleasure to find that the Tariff Board has also done us the honour of quoting from our Sugar Industry Annual on page 158 of their Report.

Recommendation for change in duty from November instead of April, in future years.

In connection with the changes in the import duty on sugar, we wish to observe, with all the emphasis at our command, that any changes in the tariff duty or the excise duty on sugar brought in the middle of the working season leads to unexpected complications and harmful consequences. We are aware that as a rule changes in tariff are made either on the date of the presentation of the budget of the Government of India or at the commencement of the financial year.

viz., 1st April. We submit, however, that there is strong reason for departing from the usual practice in the case of the sugar industry which is a seasonal industry.. As is well known, the manufacture of sugar in India commences about the month of November and continues usually till May or June. The minimum prices for cane are fixed by the Provincial Governments of U. P. and Bihar, which represent between them about 85 per cent. of the total sugar production in India,* relying on the continuance of the then existing arrangements in respect of tariff and excise duty. If any change is made during the middle of the season either by an increase or decrease in excise duty or an increase or decrease in the import duty, one or the other interests concerned, viz., the cultivator or the manufacturer is bound to be adversely affected, and in addition a serious dislocation is also caused in the trade. If, for instance, the import duty on sugar is reduced, say with effect from 1st April, it would bring about a fall in the price of sugar and the manufacturer stands to lose on his unsold stocks of sugar for the production of which he has paid cane prices at a higher rate than would have ordinarily been fixed by the Governments concerned, in the event of the possibility of a lowering of the import duty. Similarly if the import duty is increased in the middle of the season, say from 1st April, the manufacturer stands to gain on the unsold stocks of sugar, but the cultivator can complain that he has suffered in as much as he would have been entitled to a higher rate for his cane if the import duty was increased and consequently the manufacturer was enabled to get a higher price for his sugar. All things considered, we feel that if any changes in the duty on Sugar, whether excise or import, are necessary, they should be made with effect from 1st November, as it would not cause any undue disturbance either to the industrialist or the agriculturist or the trade. The Government of India have decided to continue protection to the Industry for a period of the next two years i.e., till the 31st March, 1941, but we suggest for their serious consideration as to whether it would not be desirable to make changes, if any, in the duty on sugar, in November, of any year, i.e., at the commencement of the cane crushing season.

Is Tariff Board Enquiry desirable?

We are glad to say that our suggestion for making changes in duty from November instead of April, in case of sugar, has found support from the Indian Sugar Syndicate Ltd. as well as the Indian Sugar Mills Association, who have both addressed the Government of India on this subject. We hope and trust that this suggestion will receive careful consideration of the Tariff Board which may be appointed during the year 1940 for conducting a further enquiry in the industry, and also by the Government of India as well as the Provincial

*Vide "Indian Sugar Industry Annual" 1938.

Governments, as we feel sure that if it is adopted it will be beneficial to all concerned. We doubt whether any useful purpose will be served by the appointment of a Tariff Board if war conditions continue. We suggest that in such circumstances, no Tariff Board enquiry should be held.

Necessity for taking early action on the recommendations.

We also trust that the Government of India will examine at the earliest possible date the other recommendations of the Tariff Board particularly those in connection with the manufacture of power alcohol from molasses, grant of a larger amount of money for research work, calling of an All-India Sugar Conference etc.

It is hardly necessary for us to refer here in detail to the recommendations made in the Tariff Board, a summary of which we give in the "Sugar Industry At a Glance." We have no doubt that a perusal of the report which contains a good deal of statistical material and reasoned analysis of the various problems pertaining to the Industry as also of the probable future trend of the Industry will be of great interest to all concerned in the industry.

*Present Protection to the Industry to continue till
31st March, 1941.*

We regret that the Government of India have left the industry in suspense by continuing the protection at the present level for a period of only two years, when a further enquiry has been rendered necessary to ascertain the quantum of protection for the remaining 5 years. It would have been desirable if the Government had not kept the industry in such an uncertainty and would have announced its intentions about the quantum of protection throughout the remaining period. A fresh Tariff Board Enquiry within two years was hardly necessary. It diverts the attention of the Industry from its constructive side to the preparation of a case for the consideration of the Tariff Board, and would be very difficult if the war continues, as the circumstances will be abnormal.

Effect of protection on consumers.

In our last Annual, we discussed at length the results of the policy of discriminating protection adopted by the Government, and stated our conclusion that the policy of protection in stead of creating any adverse effect, even temporarily, on the consumer, had enabled him to get his sugar much cheaper and had led to the rapid development of the industry which is also being developed by various countries of the world in view of its great importance in the national economy of the country. We are glad to say that the Tariff Board have also, after a very careful consideration of the whole question, come to the conclusion that "the ordinary consumer has, so far, no cause of complaint against the policy of protection and indeed has every reason to be satisfied."

The Tariff Board also observed "even if in consequence of a rise in the cost of manufacture due to an increase in the cost of raw material, the selling price of sugar is raised, it seems improbable that the consumer will have to pay more than he did before the advent of protection. (Vide page 125—Tariff Board's Report).

Volume of Imports and Revenue from Import Duty on Sugar, during the last 19 years.

It would be of interest to see the figures of the value of foreign sugar imported into British India during the last 19 years along with the figures of the revenue derived from the import duty, and the rate of import duty.

TABLE NO. 14

Value of imports of sugar, revenue from imports, and rate of import duty on sugar for the last 19 years.*

Year April- March	Value of foreign sugar (net) Imported in British India in Lakhs of Rupees	Revenue from Import duty on Sugar in Lakhs of Rupees	Rate of Import Duty
1920-21	1,850	185	10 p.c. <i>ad valorem</i>
1921-22	2,750	412	15 p.c. <i>ad valorem</i>
1922-23	1,549	487	25 p.c. <i>ad valorem</i>
1923-24	1,545	486	" "
1924-25	2,090	578	" "
1925-26	1,520	659	Rs. 4-8-0 per cwt.
1926-27	1,836	744	" "
1927-28	1,450	653	" "
1928-29	1,586	782	" "
1929-30	1,536	816	" "
1930-31	1,047	1,081	Rs. 6-0-0 per cwt.
1931-32	590	798	Rs. 9-1-0 per cwt.
			Rs. 9-1-0 per cwt.
			(Rs. 7-4-0 being protective, 1-13-0 being revenue surcharge from 1st April, 1932)
1932-33	2,002	685	" "
1933-34	2,263	472	Rs. 9-1-0 per cwt.
1934-35	2,205	381	(Rs. 7-12-0 being Protective 1-5-0 being equivalent excise duty from 1st April 1931)
1935-36	1,185	324	" "
1936-37*	1,548	25	Rs. 9-4-0 per cwt.
1937-38	1,345	25	Rs. 7-4-0 being protective and Rs. 2-0-0 being equivalent excise duty from 28th February, 1937)
1938-39	4,42	45	" "
1939-40 (Six months ended Sept. 1939)	3,44	201	Rs. 8-12-0 per cwt.
			Rs. 6-12-0 being protective, Rs. 2-0-0 being equivalent excise duty. (With effect from 1st April, 1939)

*Burma excluded from 1937-38.

A glance at the table will show our increasing independence on foreign countries for the supply of sugar and the decreasing amount of money sent out of the country for payments of the imports of sugar except during the last year due to bad cane crop in India. In the 10 years during 1921-31, India remitted annually a sum of about Rs. 16 crores to foreign countries for sugar. All this money now remains in the country and doubtless adds to the purchasing power of the people. Another reason for gratification is the progress made in the manufacture of *gur* along with that of sugar during the last seven years. We hope that from 1940-41 onwards, there will be no necessity of imports of foreign sugar.. To this, however,, we shall refer later.

Protection a blessing to the country.

In fact, after a careful appraisal of various relevant factors, e.g., the magnificent progress of the industry during the brief period of six years, the almost complete independence the country has achieved in the matter of supply of an important article of diet, the improvement in the condition of lakhs of cultivators as a result of better returns from the cultivation of their cane crop, the relief afforded by the development of this industry in the severe problem of unemployment, particularly amongst educated and technical men, the scope for profitable development which was afforded to indigenous dormant capital during a period of acute world depression, the development witnessed in the village industry of manufacture of *gur*, a very nutritive and unique article of direct consumption by millions of our people, as can be seen from the increase in the production of *gur* from 2,758,000 tons in 1931-32 to over 4,268,000 tons in 1936-37, and 3,364,000 tons in 1937-38 and the confidence established about India's ability in the development of industrial enterprises if suitable opportunities are created, any unbiassed and disinterested person cannot help arriving at the conclusion that the development of the Indian Sugar Industry has completely vindicated the policy of protection (adopted by the Government of India for the last decade or so) which has really speaking, revolutionised the industry, and has proved a blessing to the country.

LEGISLATIVE ENACTMENTS.

Imposition of Excise duty from 1934 pertaining to Sugar.

On 1st April, 1934 the Government of India imposed an Excise duty of Rs. 1-5-0 per cwt. (roughly equivalent to about 0-15-4 per

md.) on factory sugar produced in British India* by the vacuum pan process (modern system) and 0-10-0 on that produced by the open pan process (indigenous or Khandsari system) in spite of unanimous and strong protests from all quarters. No duty was imposed on *Palmyra* Sugar (i.e., sugar manufactured from *Jaggery* obtained by boiling the juice of the *Palmyra* palm produced largely in Madras) owing to the belief of the Government that the Industry would be severely hit as a result of the imposition of the duty. The Sugar (Excise Duty) Act, 1934* empowered the Governor-General-in-Council to levy excise duty on *Palmyra* Sugar at such rate as may be fixed in his behalf by him after such enquiry as he may think fit. No duty was imposed on *Palmyra* Sugar up to 1938-39 season and it appears unlikely to us that any duty will be imposed in the near future on *Palmyra* Sugar, the production of which is small, and which can ill bear the duty. The Tariff Board has also observed that *Palmyra* Sugar will cease to be manufactured if an excise duty is imposed on it.

Increase in Excise Duty from 1937.

On the 28th February, 1937, the Government of India increased the excise duty on factory sugar to Rs. 2 per cwt. (roughly equivalent to Rs. 1-7-6 per maund) and to Re. 1 per cwt. on Khandsari sugar. There was considerable opposition to this move of the Government of India and after very heated debates on the floor of the Indian Legislative Assembly and the Council of State in March 1937, the Finance Bill incorporating the Government's proposal for an increase of the excise duty on sugar was thrown out in the Assembly. Notwithstanding this, the Finance Bill was later certified by the Governor-General-in-Council and passed into an Act in utter disregard of and direct opposition to the wishes of the Indian Legislative Assembly for the sake of increasing the revenues from the manufacture of sugar on the ground that the development of the industry was responsible for drying up of the Government's revenue from import duty, forgetting

*The Indian States were also invited to impose an equivalent excise duty but there appears to be no compulsion, and these States can directly or indirectly give aid and encouragement to the development of the industry in their areas, by giving various facilities to factories to which the Government of India can take no objection e.g., loans without interest, provision of free godowns, imposition of import duty on Sugar entering their territory, immunity from factories Act from income-tax, and other taxes etc., particularly as the levy of such a heavy excise duty also helps the finances of these States.

*The Sugar (Excise Duty) Act, 1934, as amended upto 1939 will be found printed along with "*The Sugar Industry at a Glance.*"

or ignoring that this was a foregone conclusion, if protection to the industry was successful, *the only fault of the industrialists being that they developed the industry far more rapidly than was imagined by the Government.* Far from their being complimented on this remarkable achievement and far from their action being appreciated, they were penalised as it were, by subjecting this industry to such a heavy taxation (the increase in duty being more than 50 per cent.).

Change in excise duty on Khandsari Sugar

With effect from 28th February, 1939, the excise duty on *Khandsari* sugar was decreased to 8 annas per cwt. by an amendment made under clause 3(b) of the Indian Finance Act, 1939.

Northern India Sugar Excise Duty Order, 1938.

The Sugar Excise Duty Order, 1934, was replaced by the Northern India Sugar Excise Duty Order, due to the centralisation of the administration of the Central Excises from 1st April, 1938. (*Vide* "The Sugar Industry at a Glance.")

Sugar Cane Act, 1934.

On 1st May, 1934 the Sugarcane Act* also received the assent of the Governor-General. The Sugarcane Act was intended to secure to the growers of sugarcane a fair price for their produce, to regulate the price at which sugarcane intended to be used in the manufacture of sugar may be purchased by or for factories, etc. It provides that a local Government may declare any specified area to be a 'controlled area' and that it may prohibit the purchases in such area of sugarcane intended for use in any factory otherwise than from the grower of the sugarcane or from a licensed purchasing agent. It also empowers the Local Government (subject to the control of the Governor-General-in-Council) to fix by notification in the local Official Gazette a minimum price or minimum prices for the purchases in any controlled area of sugarcane intended for use in factory.

Sugar Industry Protection (Temporary Extension) Act, 1938.

The Sugar Industry Protection (Temporary Extension) Act, 1938, was passed in 1938 continuing the existing protection to the industry up to 31st March, 1939. For the text of the Act, *Vide* "Sugar Industry at a Glance."

*Not printed. Act repealed in U. P. and Bihar, in 1938. Rules issued under this Act are superseded by Rules made under provisions of the Sugar Factories Control Act, in U. P. and Bihar in 1938.

Sugar Industry (Protection) Act, 1939.

The Sugar Industry Protection Act, 1939, was passed continuing protection to the Industry at a reduced rate of Rs. 8-12 per cwt. from 1st April 1939 up to 31st March 1941. (For the text of the Act *Vide* "Sugar Industry at a Glance").

Notification for Prohibition of Export of Sugar.

As a result of the ratification of the International Sugar Agreement, the Government of India prohibited the export of sugar from India by sea, except to Burma, for a period of five years beginning from January 1938.† (*Vide* the "Sugar Industry at a Glance").

U. P. and Bihar Sugar Control Acts.

The Sugar Factories Control Act was passed by the U. P. and Bihar Governments, and brought into effect by February 1938. In 1939, the U. P. Sugar Factories Control Amendment Act was passed for making certain amendments in the Control Act of 1938. Rules under these Acts were published by Bihar and U. P. during the latter part of 1938 and certain amendments were made in the year 1939. (*Vide* "Sugar Industry at a Glance").

The U. P. Power Alcohol Act, 1939

In 1939, The United Provinces Legislatures passed the U. P. Power Alcohol Act passed providing for the fostering, development and regulation of the industry of Power Alcohol. It prohibits the use of petrol without admixture with Alcohol for motive power for any motor vehicle in the Province. It also provides that the manufacture of Power Alcohol from molasses will be under a license to be obtained from the Government who will prescribe the price at which the Power Alcohol shall be sold by the manufacturer to the Government, the maximum and minimum quantities of power alcohol which shall be manufactured by the licensee etc. The act also provides that Power Alcohol can be manufactured only from molasses. There is no specific provision in the Act regarding the price at which molasses would be purchased by the manufacturers of Power Alcohol (*vide* "Sugar Industry at a Glance").*

The United Provinces Agricultural Produce Marketing Bill, 1939.

This bill was introduced in the U. P. Assembly to provide for the better regulation of the purchase and sale of agricultural produce and establishment of markets for same in the U. P. The Bill seeks to provide for compulsory marketing of agricultural produce including

*This Act did not receive the Governor's assent till 28th November, 1939.

sugar cane through Co-operative Societies under certain conditions. Under clause 20(2), if in any agricultural village or a group of such villages, there exists a Co-operative Society for the purpose of producing or marketing any specified agricultural produce and more than 50 per cent of the persons producing such agricultural produce or cultivating more than 50 per cent. of the land suitable for cultivation are members of the Society, the Registrar of Co-operative Societies can issue direction that *the entire crop shall be marketed through that Society*. Under the U. P. Sugar Factories Control Act, the factories are prohibited from purchasing cane directly from cane growers, who are members of a Co-operative Society. The combined effect of the provisions of these two Acts, as soon as they are brought into force, would be *that factories would have to depend entirely and exclusively on Cane Co-operative Societies for the supply of cane in areas where 50 per cent of the growers are members of a Co-operative Society*. The Sugar manufacturers feel that the Co-operative Societies running at present are not entirely satisfactory and therefore suggest that great care should be taken before activities of the existing Cane Co-operative Societies are extended to all areas. In order to ensure the development of Societies on healthy and sound lines and to regulate such development by a proper appreciation by the agriculturists of the benefits of Co-operative movement, it has been suggested by the Industry that the limit for compulsory membership of the Societies by agriculturists should be raised from 50 per cent. to 75 per cent. both as regards the number of growers and the area of land under cultivation of cane. It is not known what fate this Bill will meet with as the result of the resignation of the Congress Ministry on 31st October, 1939.

Cane price fixation in other Provinces

During 1938-39, fixed the minimum price of cane at Rs. 9-8⁰⁰ per ton in the Hospet area. The Mysore Government have been fixing minimum price of cane purchased by the Sugar Factory at Mandya since 1936 under the Sugar Industries Safeguarding Regulation. The Governments of Bengal, Bombay and the Punjab have not fixed any minimum price of cane till now.

Cess on cane 0-0-6 per maund in U. P. and Bihar from 1938-39

The Governments of U. P. and Bihar levied a cess with effect from the commencement of the 1938-39 season of 6 pies per maund on all sugar cane purchased by factories in addition to the cane prices. The estimated revenue expected to be derived from the cess in U. P.

during 1938-39 was Rs. 30 lakhs and in Bihar Rs. 15 lakhs. The cess was imposed under section 29 of the Sugar Factories Control Act of U. P. and Bihar. The object of the imposition of the cess was development of cane cultivation. The cess was continued at the same rate in 1939-40.

U. P. & Bihar Sugar Control Board.

As a result of the Sugar Factories Control Act in U. P. and Bihar, the Governments of U. P. and Bihar constituted a Sugar Control Board in the year 1938. The Sugar Control Board of the Government of Bihar, and of the Government of U. P. has the same personnel and meets at Lucknow or Patna according to convenience. The Board consists of one Minister and one Secretary from the U. P., one Minister and one Secretary from the Government of Bihar, five representatives of the Industry, five representatives of cane cultivators, and one representative of merchants.

The meetings of the Sugar Control Board are held jointly, at Patna or Lucknow, several matters on the agenda being common to both the Provinces, and several matters being separate.

Fixation of minimum Cane Prices in U. P. and Bihar.

In the year 1934, the Government of U. P. and Bihar made Rules under the Sugar Cane Act of 1934 regulating the purchase of cane and fixation of minimum prices to be paid for it. Till the 1936-37 season, the cane prices both in U. P. and Bihar were fixed for every fortnight varying with the price of sugar realised by the factories. Conferences were convened annually by the two Provincial Governments for considering questions pertaining to the modification of the basis on which the minimum price was fixed, in order to secure an equitable distribution between cane growers and the factory owners, etc., and in order to solve the difficulties which may have been felt in the working of the rules in the light of new experience gained from the previous season.

In the 1937 Annual we referred to the Conferences held on June, 1937 in the U. P. and in our 1938 Annual we referred to the Bihar and U. P. Joint Sugar Conferences held at Lucknow on 20th September 1937, and to the two Sub-Committees of the Joint Conference to consider in detail (a) the question of the marketing of sugar, and

(b) zoning and other proposals for legislation respectively, held at Patna on the 21st October 1937. As a result of these conferences, the Governments of U. P. and Bihar decided to fix a single irreducible minimum price of sugar cane, and announced that for the entire season of 1937-38, the factories will have to pay -|5|3 per maund for gate cane, and -|5|- for rail cane. Thus the sliding scale for sugar cane prices which was in force till 1936-37 was abolished in the beginning of 1937-38. In the 1938-39 season, as a result of the improvement in the sugar prices, the Governments of U. P. and Bihar fixed the minimum price of cane for the season 1938-39 at -|6|9 per maund for gate cane, -|6|6 per maund for rail cane purchased within 28 miles of the factory and -|6|3 per maund for rail cane purchased beyond 28 miles of the factory. As a result of the increase in sugar prices owing to the anticipated shortage in the internal production of sugar, the Government of U. P. increased the minimum price of cane, (thus deviating from the principle of fixing a single irreducible minimum price of cane for the whole season), with effect from 13th January 1939, by one anna per maund in the whole province. The Government of U. P. further increased the minimum price of cane in March, 1939, by one anna per maund. In view of the large fluctuations in the price of sugar and of the feeling of the Government of U. P. and Bihar that it would not be fair to fix a single irreducible minimum price for the whole season having regard to the interest of cultivators of cane who should be allowed to participate in the benefit of high prices of sugar, if they accrue to factories, the whole question of the fixation of minimum prices of cane was reviewed during the year 1939, and it as a consequence, in the 1939-40 season, the method adopted hitherto, viz., of fixing an irreducible minimum price of cane for the entire season, has been dropped and the old system of relating cane prices to current sugar prices which was in operation during 1934-35, 1935-36, and 1936-37 has been introduced again.

Problem of Minimum price of Cane in 1939-40.

The question of the fixation of the minimum price of cane on the basis of some general principle was discussed for the first time at the sixth meeting of the Sugar Control Board at Lucknow on 11th February 1938. The Board also decided to invite the views of the Industry on this question. The Indian Sugar Mills Association replying in April, 1939, invited the attention of the Government to the necessity of bringing about stable conditions in the Industry and avoiding fluctuations which were caused by the variations in the price of cane from time to time. They suggested that the minimum price

of cane should be fixed on the basis of the cost of production of cane for a long period.

Regulated profit of the Industry

A suggestion was also made at the sixth meeting of the U. P. and Bihar Sugar Control Board held on 11th February, 1939, that the Sugar Industry might consider if it would be content with a regulated profit by which profit in excess of a certain percentage allowed to sugar factories would be paid as bonus to the growers. Referring to this proposal, the Indian Sugar Mills Association replied that it not only offended the fundamental conception of the freedom of private enterprise but was also unworkable in practice. Stress was also laid on the necessity of maintaining an incentive for individuals to take the risk of investment and it was also pointed out that the proposal would give rise to enormous difficulties as to how the reasonable profit to be left to the factories was to be determined in actual practice. The question of regulated profits and of minimum prices of cane was further discussed at a meeting of the U. P. and Bihar Sugar Control Board held at Patna on the 19th April, 1939. Various views were advanced, the representatives of the industry advocating the opinion that in view of the competition from other provinces it was desirable to keep down the price of sugar (and consequently of cane) to about Rs. 6 per maund and that meant that cane prices would have to be based at -|3|- and -|3|6 per maund. Criticism was also levelled at the present policy of keeping up cane prices which would mean progressive expansion of the sugar industry in other provinces.

Sliding Scale Prices Subcommittee.

At the Sugar Control Board Meeting, held on 29th April, 1939, the question of fixing a sliding scale of sugar and sugar cane prices was considered. The Hon'ble Dr. Katju, Minister of Development in U. P. is reported to have observed that he would very much like the cultivator get his cost of production of cane and of one anna profit per maund of cane, and that the cultivator should get some share in the rise of sugar prices during the off season. The Hon'ble Dr. Saiyid Mahmud, Minister for Bihar, is reported to have expressed himself in favour of an absolute minimum of 5 annas per maund of cane and to have suggested that a reduction of sugar prices to Rs. 6 per maund might be worked up in a period of 5 years. The Control Board decided to refer the question of the sliding scale of cane prices, which it was suggested, should be introduced, and the question of devising means

and methods for the development of cane in U. P. and Bihar to a sub-committee consisting of the following persons and with the following terms of reference.

1. Mr. N. C. Mehta, I.C.S., Secretary to Government, United Provinces, Agriculture Department.—Chairman and Convener.

2. Mr. S. M. Dhar, I.C.S., Secretary to Government of Bihar, Development Department. Member.

3.. Mr. D. R. Narang, Basti,—Member.

4. Lala Shri Ram, New Delhi Member.

5. Prof. Shibban Lal Saxena, M.L.A.—Member.

6. Mr. Bepin Behari Verma, M.L.A., (Central), Bihar.—Member.

2. The terms of reference of the Sub-Committee will be:—

(a) to report on the scheme of minimum price of sugarcane and to consider the feasibility of a sliding scale of canes and sugar prices.

(b) To consider ways and means of stabilising sugar prices or mitigating fluctuations thereof throughout the year.

(c) To prepare a scheme of cane development in the two provinces of United Provinces and Bihar during the next five to seven years. In considering the sliding scale the Sub-Committee will keep in view that it is desirable: —

(i) To ensure the cultivator the cost of production of sugar-cane together with a reasonable margin of profit with a minimum of 5-6 and

(ii) To ensure to the manufacturer a reasonable profit over his production cost.

3. The Sub-Committee should submit its report before June 30, 1939 as far as possible.

4. Mr. Vishnu Sahay, I.C.S., Cane Commissioner, United Provinces, Mr. V. K. Pillai, I.C.S., Cane Commissioner, Bihar and Mr. R. C. Srivastava, Director, Imperial Institute of Sugar Technology, Cawnpore, will act as Technical Advisors to the Sub-Committee.

All the Members of the Sub-Committee were present at a meeting held in Naini Tal on 17th, 18th and 19th June, 1939. After a considerable discussion between the representatives of the cane growers and manufacturers they reached an unanimous decision on the scale to

be recommended to the Sugar Control Board. The scale adopted unanimously by the Sub-Committee is given below.

TABLE NO. 15

Sliding scale recommended by sub-committee.

<i>Price of sugar per maund</i>			<i>Price of cane* per md.</i>		
Rs.	A.	P.		Rs.	A. P.
7	12	0 and under	0 5 0
7	12	0 to Rs. 8 0 0	0 5 3
8	0	0 " " 8 4 0		...	0 5 6
8	4	0 " " 8 8 0		...	0 5 9
8	8	0 " " 8 12 0		...	0 6 0
8	12	0 " " 9 0 0		...	0 6 3
9	0	0 " " 9 4 0		...	0 6 6
9	4	0 " " 9 8 0		...	0 6 9
9	8	0 to Rs. 9 12 0		...	0 7 0
9	12	0 " " 10 0 0		...	0 7 3
10	0	0 " " 10 4 0		...	0 7 6
10	4	0 " " 10 8 0		...	0 7 9
10	8	0 " " 10 12 0		...	0 8 0
10	12	0 " " 10 15 0		...	0 8 3
10	15	0 " " 11 2 0		...	0 8 6
11	2	0 " " 11 5 0		...	0 8 9
11	5	0 " " 11 8 0		...	0 9 0
11	8	0 " " 11 11 0		...	0 9 3
11	11	0 " " 11 14 0		...	0 9 6
11	14	0 " " 12 1 0		...	0 9 9

The basis of calculation of sugar prices will be the same as when the previous sliding scale was in use. The scale was unanimously accepted on the assumption of the existing rates of sugar excise, cess and co-operative commission being maintained.

The Indian Sugar Syndicate gave a very thorough consideration to the question of the adoption of a sliding scale of cane and sugar prices for the industry in U. P. and Bihar and after entering into detailed calculations about the manufacturing cost, the margin of profit per maund of sugar, percentage of profit to factories on the basis of the capital outlay and the percentage of profit to the cane grower on the basis of the cane prices suggested by the Cane Commissioner,

*The price refers to gate-cane.

arrived at the conclusion that the sliding scale required modification if it was not to be very irksome and harmful to the Industry. The sliding scale suggested by the Syndicate was as follows:—

TABLE NO. 16

Sliding scale as suggested by Indian Sugar Syndicate in April, 1939

Price of sugar per maund				Price of cane per maund			
Rs.	8	0	0	to Rs.	8	4	0
							0 4 6
"	8	4	0	"	"	8	8 0
							0 4 9
"	8	8	0	"	"	8	12 0
							0 5 0
"	8	12	0	"	"	9	0 0
							0 5 3
"	9	0	0	"	"	9	4 0
							0 5 6
"	9	0	0	"	"	9	8 0
							0 5 9
"	9	8	0	"	"	9	12 0
							0 6 0
"	9	12	0	"	"	10	0 0
							0 6 3
"	10	0	0	"	"	10	8 0
							0 6 6
"	10	8	0	"	"	11	0 0
							0 6 9
Over Rs.	11	12	0				0 7 0

Subsequently on the outbreak of the war in Europe, the Indian Sugar Syndicate addressed a further letter on 25th September, 1939, to the Government of U. P. and Bihar stating that as the outbreak of the war would result in additional expenditure of about 12 annas per maund in the manufacturing cost due to the increase in the price of various raw materials, chemicals, stores, fuels, repairs and renewals, interest etc., the amended scale submitted by the Syndicate on the 22nd April, 1939, should be further altered and during the period of the war, in consideration of the allowance to be made for an increase in the manufacturing cost, the following scale should be substituted:—

TABLE NO. 17

Amended Scale Suggested by the Sugar Syndicate in September, 1939

Price of sugar per maund				Price of cane per maund			
Rs.	8	12	0	to Rs.	9	0	0
							0 4 6
"	9	0	0	"	"	9	4 0
							0 4 9
"	9	4	0	"	"	9	8 0
							0 5 0
"	9	8	0	"	"	9	12 0
							0 5 3
"	9	12	0	"	"	10	0 0
							0 5 6
"	10	0	0	"	"	10	4 0
							0 5 9
"	10	4	0	"	"	10	8 0
							0 6 0
"	10	8	0	"	"	10	12 0
							0 6 3
"	10	12	0	"	"	11	4 0
							0 6 6
"	11	4	0	"	"	11	12 0
							0 6 9
Over Rs.	11	0	0				0 7 0

A further meeting of the Sub-Committee of the United Provinces Sugar Control Board was held at Lucknow on the 5th and 6th October, 1939, and was attended by the following gentlemen :—

- | | |
|-------------------------------------|-------------------|
| 1. Mr. N. C. Mehta, I.C.S. | <i>Chairman.</i> |
| 2. Mr. S. M. Dhar, I.C.S. | |
| 3. Mr. D. R. Narang, Basti, | } <i>Members.</i> |
| 4. Prof. Shibban Lal Saxena, M.L.A. | |
| 5. Mr. Bepin Behari Varma. | |

The question of an amendment of the sliding scale of cane prices proposed by the Indian Sugar Syndicate was discussed. It is reported that after considerable discussion, it was decided that there was no case for altering the sliding scale with which the Sub-Committee was concerned, and that any increase in the cost of manufacture of sugar or the cost of cultivation of cane as a result of such unforeseen emergency should be considered separately. The question of the machinery for working the sliding scale, if adopted by the Government, was also considered and the Sub-Committee was of the opinion that the Director, Imperial Institute of Sugar Technology, should be appointed as the authority to work out the common minimum price and communicate the same to both Governments. The Sub-Committee was of the view that the same cane prices should prevail in Bihar and the United Provinces and a common price should be arrived at by the method of adjustment which would be fair to both. Thus, for instance, according to the Sub-Committee if the average of sugar quotation for U. P. for a fortnight is Rs. 9-1 in the range of Rs. 9|- to Rs. 9-4 and to Bihar it is Rs. 8-14 in the range Rs. 8-12 to Rs. 9|-, the nearest common figure to be accepted for fixing the price of cane according to the scale would be taken as Rs. 9|-.

The Sub-Committee also considered the question of stabilisation of sugar prices and were unanimously of the opinion that it was desirable to avoid violent fluctuations of sugar prices and in the interest of the sugar industry in U. P. and Bihar they felt it was necessary to work up to a programme of 5 to 7 years on the assumption that the improvement in the efficiency of cane cultivation will progressively increase, and that there will be a decline in the sugar prices over a term of years. In other words, it was necessary that the Industry in these two Provinces should be in a position to keep sugar prices at a low level, and that this is only possible if there is a progressive increase in the output of cane in terms of sugar per acre. It was also recognised that the return to the cultivator per acre of cane should increase though it must decline per maund of cane as sugar prices continue to be lowered. In other words, in the opinion of the sub-committee the

improvement in the efficiency of cane cultivation and the maintenance of sugar prices at a reasonably low level were conditions precedent to the maintenance and progressive development of the sugar industry in the two Provinces.

The report of the Sub-Committee came up for discussion at the 8th meeting of the Sugar Control Board held at Lucknow on the 7th October but was postponed to the next meeting for further consideration. This report was brought up for consideration at the 9th meeting of the Sugar Control Board held at Lucknow on the 24th October, 1939 and it is understood that no decision could be reached in regard to the matter owing to a divergence of opinion amongst the members. It is also understood that the question of adjustment of cane price on account of rise in off season by the grant of a surcharge or rebate to the cultivators in the following season based upon the average price of sugar during the off season was also considered but no agreement could be arrived at due to its being found impracticable.

The scale ultimately adopted by the Governments of U. P. and Bihar reduced the price of Sugar for 0-5-0 per maund cane price from Rs. 7-12-0 to Rs. 7-10-0, and for the first fortnight of November, the prices of sugar were fixed on the basis of the scale, as amended by the U. P. and Bihar Governments. The amended scale, which was adopted, for 1939-40 is given below:—

TABLE NO. 18

Sliding Scale adopted by U. P. and Bihar Governments for fixing minimum price of cane in 1939-40.

Price of Sugar per maund			Price of cane per maund		
Rs. A. P.			Rs. A. P.		
7 10 0	and under		0 5 0		
7 10 0	" "	7 14 0	0 5 3		
7 11 0	" "	8 2 0	0 5 6		
8 2 0	" "	8 6 0	0 5 9		
8 6 0	" "	8 10 0	0 6 0		
8 10 0	" "	8 14 0	0 6 3		
8 14 0	" "	9 2 0	0 6 6		
9 2 0	" "	9 6 0	0 6 9		
9 6 0	" "	9 10 0	0 7 0		
9 10 0	" "	9 14 0	0 7 3		
9 14 0	" "	10 2 0	0 7 6		
10 2 0	" "	10 5 0	0 7 9		
10 5 0	" "	10 8 0	0 8 0		
10 8 0	" "	10 11 0	0 8 3		
10 11 0	" "	10 14 0	0 8 6		
10 14 0	" "	11 1 0	0 8 9		
11 1 0	" "	11 4 0	0 9 0		
11 4 0	" "	11 7 0	0 9 3		
11 7 0	" "	11 10 0	0 9 6		
11 10 0	" "	11 13 0	0 9 9		
11 13 0	" "	12 0 0	0 10 0		

Effects of Excise Duty.

We have referred at great length in the previous Annual to the effects of the Excise Duty on the Indian Sugar Industry. We also observed that the burden of the additional Excise Duty imposed in 1937 was really passed on to the cultivator to a very large extent, particularly, as there was no irreducible minimum price of cane.

In this connection, we would like to quote the following observations of the Indian Tariff Board (*vide* page 160 of their Report).

“Unless the price of sugar can be raised to a level approaching the fair selling price suggested by us for the remaining period of protection, we doubt if the present level of Excise Duty can be maintained without detriment to the Industry, and particularly to the interest of the cultivator.”

We have already referred to the observations of the Government of India on this recommendation of the Tariff Board for a reduction of the Excise Duty on sugar, and we do not wish to lay stress on the necessity of a reduction in the Excise Duty, bearing in mind the views of the Government of India on this matter, and the necessity for raising more revenue from the industry.

We do feel however that a heavy Excise Duty of Rs. 2|- per cwt. will continue to have an adverse effect on the cultivator if the price of sugar cannot be raised substantially, for it would be difficult for factories to offer a considerably high price of cane to the cultivators so long as the high Excise Duty continues. This is not applicable to the 1939-40 season where prices ruled high, owing to the out-break of war and the imports of foreign sugar not being available except at high prices.

Capital and Dividend Statement of Sugar Factories.

Several factories worked at a loss in the 1937-38 season as the balance-sheets of a few Companies given below will show :

TABLE NO. 19

Balance sheets of Sugar Companies and Dividends since 1932.

Name of Sugar Factory	Paid-up Capital with Debentures*	Net Block	DIVIDEND						
			1932	1933	1934	1935	1936	1937	1938
	Rs.	Rs.							
Balarampur...	23,00,000	26,76,654	10	10	10	3½	2½
Basti ..	11,99,600	23,01,591	30	25	25	15	25	15	15
*Belsund ...	20,49,950	17,21,091	Nil	Nil	Nil	Nil	Nil
Belapur ...	37,59,800	10,56,208	24	24	16	14	14
*Bharat ...	7,50,000	7,17,591	7½	10	...
Buland ...	18,00,000	19,50,940	5	6	11½
Carew ...	20,00,000	15,98,266	12½	15	15	12½	12½	10	10
*Cawnpore ...	25,00,000	34,33,029	35	30	30	25	10	5	5
Champaran ...	14,62,000	22,94,554	15	15	5	0	20	5	5
Deccan Sugar & Abkhari ...	15,30,003	7,88,271	...	20	30	35	20	10	10
*East India Distilleries & Sugar Factories ..	£321,881	£275,067	10	10	7½	10	10	5	10
*Mysore ..	33,01,200	32,21,008	10	11½	15	10	15
New Savan Sugar	11,00,000	9,59,744	15	12½	10	Nil	10	Nil	Nil
New Swadeshi	11,25,000	6	6	7
Oudh ...	16,48,000	7	6	9
Punjab ...	9,74,000	8,65,131	40	40	40	15	20	15	15
Purnea ...	18,00,000	12,21,550	Nil	Nil	Nil	Nil	Nil
Purtabpore ...	15,00,000	18,23,927	10	10	7½	Nil	7½	Nil	Nil
Raza ...	15,00,000	16,87,091	5	6	10	7½	12½
*Ryam ...	7,75,000	6,84,206	30	30	15	15	10	Nil	Nil
*Samastipur ..	15,99,000	12,78,159	10	12½	Nil	Nil	Nil	Nil	Nil
*Shree Sitaram ..	10,95,462	12,65,524	6½	Nil	10	10
*Sitalpur ...	12,35,175	18,77,701	6	Nil	8	Nil	2½
*South Bihar ...	12,50,000	20,20,224	10	12½	15	15	25
*Upper Ganges ...	11,99,950	13,69,094	Nil	Nil	5	7½	7½

A perusal of the above table will show that during the year 1937-38, the margin of profit has been reduced and that it has not been

*Only those marked with asterisks include Debentures.

possible for many factories to make a profit of even 10 per cent. during the last two years.

The Tariff Board made the following observation in regard to the rate of profit to be allowed to factories :

“Taking all points into consideration, we do not think that an allowance of 10 per cent. profit on the fair selling price is excessive” (*vide.* page 80 of the Tariff Board).

In a normal year, a factory may be able to realise 10 per cent, but in unfavourable years, like 1938-39, the profit will be less, if there is any profit at all, or even there may be a loss.

Tariff Board's Estimate of Cost of Production of Sugar in India.

We would therefore recommend to the Governments which fix the minimum price of cane to give due consideration to the necessity of allowing a fair profit to be made by the sugar factories, and we would invite the attention of the Governments to the Table on page 80 of the Report of the Tariff Board, which, according to the Tariff Board, should be the cost of production of sugar for the whole of India in the light of their conclusions for the remaining period of protection, that is, up to the 31st March 1946. According to the Tariff Board, the manufacturing charges for a representative factory in India in a normal season are Rs. 1-12 per maund while the overheads are Rs. 1-8 per md. Along with the cost of raw material, which they have computed at Rs. 3-9-9 per md. on the basis of cane at Rs. 5/6 per md. and recovery of one maund of sugar from 10.5 mds. of cane, the total cost of production per maund of sugar thus comes to Rs. 6-13-10.

The cost of raw material thus works out to	...	52.8%
Manufacturing charges	„ ...	25.49%
Overhead charges	„ ...	21.93%

Total Consumption of Sugar including Gur (Raw Sugar) in India.

Before dealing with the various problems facing the sugar industry and the progress made in respect of them during the last year, we will refer to one more question, i.e., the total consumption of sugar including *gur* in India. In the previous pages, we have referred to the question of consumption of factory sugar, and Khandasari sugar, but not of “all sugar” in India. Apart from this quantity (estimated at about 11½ lakhs tons during 1936-37 and 10 lakhs tons in 1938-39) of refined sugar, India consumes a very large quantity of *gur*. The total

annual production of *gur*, all of which is consumed in the country, is now about 32 lakhs of tons. Figures of net production of *gur* from 1927-28 to 1938-39 are given in the Table below.

TABLE NO. 20

Calculated Net Production of Gur in India for direct consumption, from 1927-28 to 1938-39*

Year (November-October)	Calculated net Annual Production of <i>Gur</i> for direct consumption in Tons			
1927-28	2,279,000
1928-29	1,787,000
1929-30	1,842,000
1930-31	2,241,000
1931-32	2,758,000
1932-33	3,240,000
1933-34	3,486,000
1934-35	3,701,000
1935-36	4,101,000
1936-37	4,268,000
1937-38	3,364,000
1938-39 (Our Estimate)	3,200,000

It must be remembered that the population of India is largely rural, over 70 per cent. of the people living in the villages, and *gur* has been used not only as a sweetening agent, but principally as an article of diet in the villages for several generations. *Gur* is also used on ceremonial and auspicious occasions by the people not only in villages but even in towns. It has a nice flavour, delicious taste, and is a very nutritive and unique article of diet by millions in India.

What is Gur or Jaggery?

Gur or Jaggery could be well defined as cane juice boiled to a temperature of 115°C., containing from 50 to 85 per cent. of sucrose, 10 to 20 per cent. of inverted sugar, and a smaller percentage of

*Figures for net production are calculated from the figures for total yield of *Gur* in the "Final general Memorandum" each year allowing for the *Gur* equivalent to cane used for other purposes (adopting the conversion factor of 10). *Vide* Review of the Sugar Industry of India for 1936-37, issued as supplement to the Indian Trade Journal, dated 2nd November, 1939.

mineral salts, ash and moisture. Most nearly, it may be described as hardboiled massecuite. This is the form in which about $4\frac{1}{2}$ million tons of *gur* is annually consumed by our people in this country. In colour, purity, hardness, flavour and shape in which it is marketed, *gur* varies greatly from tract to tract but with relatively unimportant exceptions. Most of the *gur* produced is consumed directly, only about 2 per cent. being used for conversion into sugar in refineries. Thus *gur* is not a raw material for refining sugar but a final product for domestic consumption. *Gur* is manufactured in most sugar cane growing villages by the simplest of process. Modern 2-roller, 3-roller and 5-roller mills driven by oil engines have replaced the earlier pestle-and-mortar type of mills made of stone or wood. Appreciable improvements have also been made in the furnaces and pans, but in essentials, the process is much the same as it was a hundred years ago, the fresh cane juice being boiled down to a solidifying point in an open pan. A certain amount of clarification takes place during this process and multiple pans are common in some tracts where high-class *gur* is made. Ordinarily one or two pans are used for boiling but some times as many as 12 are arranged in a series.

U. P. Government's Scheme for improving gur

Research is constantly going on for making *gur* more economically and efficiently. About the largest quantity of *gur* is manufactured in the United Provinces, which is also taking considerable interest in the improvement of methods of the manufacture of *gur*. In our last we stated that the U. P. Government arranged for demonstrations under the Gur Development Scheme at about 150 centres in 30 Gur U. P. Government issued a leaflet giving broad outlines of the Gur Industry Scheme. It pointed out that although the Province had 73 sugar factories, they took up only $17\frac{1}{2}$ of the cane crop while 6.8% was used for making Khandsari sugar, about 8% for seed and chewing, and the balance of about 68% was converted into Gur. These figures relate to the year 1937-38. The annual out-put of *gur* in the Province according to the calculations of the Department of Industries U. P., was about $5\frac{1}{2}$ crores of maunds, roughly equivalent to 20 lakhs tons and valued at about Rs. 11 crores. The importance of the *gur* making industry is thus great to the Province.

The object of the Government is to introduce improvements which would lead to a greater yield, superior quality and a favourable price. The main features of the Scheme are:—

1. To introduce improvements in all the 46 cane growing districts of the Province,

2. to demonstrate improved methods at the farm of the cane growers, and
3. to provide technical advice and assistance to the cane growers,
4. and to pay particular attention to marketing problem etc.

The scheme when introduced in all the 46 cane growing districts will cover about 5,000 villages and will provide employment to about 600 whole and part time workers.

It is difficult to state with precision the cost of manufacture of gur as it varies from year to year and from district to district, but roughly it may be taken as Rs. 1|1|- per md. for the U. P. and the Punjab (vide Tariff Board Report page 51). Taking -|4|- as the present cost of cane, the Tariff Board stated the cost of production of 1 md. of gur would be Rs. 1-3-9.

It is also difficult to arrive at a correct figure of the average price of gur, because, it differs considerably according to the quality and varies from district to district and from town to town and from month to month. The average price of gur per maund varied from Rs. 5-5-9 to Rs. 2-9-0 during the years 1930-31 to 1937-38. Since 1934-35, the price of gur was generally on the decline till 1937-38 due perhaps to the production of larger quantities and to a certain extent to the decline in the price of sugar. The price of *gur*, and sugar rose during 1938-39.

Activity of gur making in Reserved Areas in U. P. not favoured

During the year 1938-39, sugar factories were concerned about the activities of the Gur Refining Department which carried on propaganda for encouraging the manufacture of gur in the reserved areas of factories in the U. P. The factories urged that the reserved areas were intended exclusively for the use of the factories and they carried on development work in those areas at great expenditure, and thus it was unfair to them that cane grown in such areas should be utilised otherwise. The Government of U. P. issued instructions in March 1939, to exclude villages under the Cane Development Scheme from the list of villages selected, for the introduction of the *gur* Development Scheme, and made it clear that the scheme was only meant for villages where cane growers were unable to dispose of their cane to factories. In September 1939, the Cane Commissioner of U. P. issued a note on Gur Development stating that the Director of Industries had issued instructions to the District Gur Controlling

Officers that the list of villages under the Gur Development Scheme should be scrutinised so as to exclude the villages lying in the Cane Development Zones and permanently reserved areas of factories.

In the Table below, we give statistics of the *per capita* consumption of sugar, as well as *Gur*, for the last nine years. The importance of the *gur* manufacturing industry—although essentially a cottage industry—will be seen from this table. It must be noted that the quantity of *gur* consumption in India is about four times that of refined sugar. While the *per capita* consumption of white sugar in India is low, we must not ignore the figures of consumption of *gur* when comparing the *per capita* consumption of sugar in India with the consumption in other countries of the world.

TABLE NO. 21

*Total, and per capita Consumption of Sugar, and Gur in India.**

Year (Nov- Oct)	Consumption of sugar in tons.	Official Estimate	Consumption of Gur in tons.	Per capita Consumption in lbs.		
				Sugar	Gur	Total of Sugar & Gur
				lbs per head	lbs per head	lbs per head
1931-32	982,000	"	2,758,000	6.2	17.2	23.4
1932-33	1,006,000	"	3,240,000	5.8	20.2	26.0
1933-34	996,000	"	3,486,000	5.8	21.6	27.4
1934-35	1,059,000	"	3,701,000	6.5	22.7	28.9
1935-36	1,074,000	"	4,101,000	6.5	26.7	33.2
1936-37	1,167,000	"	4,268,000	7.3	24.9	34.2
1937-38	1,159,000	"	3,364,000	7.1	21.0	28.1
1938-39	966,000	(Our est.)	3,200,000	5.7 (Our est.)	20.2	25.9

The production of *gur* in 1937-38 has been estimated at about 33 lakhs tons as compared with 42,68,000 tons in 1936-37 and 41,01,000 tons in 1935-36. This shows that the production of *gur* fell in 1937-38, due to scarcity of cane. We have already seen before that 62 per cent of the total cane crop in 1937-38 is estimated to have been utilised for the manufacture of *gur*. Although the main subject

*Vide the Review of the Sugar Trade of India, for the year 1937-38, published with the Indian Trade Journal dated 2nd November, 1939. The total value of the sugar, including *gur*, produced in 1937-38 may be estimated at Rs. 600,000,000.

of our study here is the problem of refined sugar, we cannot ignore the fact that it represents about 1/5th only of the total consumption of sugar (*gur* as well as sugar) in India. The main reason why we have discussed the problem in connection with refined sugar in such great detail and are making only a passing reference to the question of *gur* is that whereas the former really constitutes a "problem" on account of the multiple, diverse and complex economic factors and the bearing of international questions in the study of it, the latter, viz. *Gur* does not present so serious a problem due to its being a commodity for domestic consumption only. There is no import of *gur* from outside, and the export is negligible. Thus, no competition has to be faced in the matter of *gur* with any foreign country.

Gur Manufacture—a Cottage Industry

Although the quantity of *gur* produced in India is now nearly 4 times as big as the quantity of refined sugar at present, the method of production of this enormous quantity, it must be admitted, is very primitive. Its manufacture consists of two main process, viz. crushing of cane and subsequently boiling of juice. It is essentially a cottage industry and is manufactured in small quantities. The extraction of the juice from cane is about 60 per cent in the case of bullock driven mills and up to 70 per cent in the case of power driven mills. The best quality of *gur* is produced in coimbatore, Kolahpur, and Meerut. Such superior *gur* remains in good condition for about a year where the climate is a little dry but it deteriorates in humid atmosphere in about 3 months.

Statistics Re: Movement of Gur Scanty.

At the present moment, *gur* requires no elaborate form of marketing. No attempt has so far been made to estimate the quantity of *gur* consumed in the various Provinces of India. This is due to the fact that information regarding the movement of *gur* is very scanty. Figures for imports and exports of *gur*, by rail and river from Provinces and States are not separately available, these being combined with those for molasses etc. Large quantities of *gur* are transported by road over long distances, and the error without allowing for this fact is likely to be considerable. Therefore, any estimate of the quantity for consumption of *gur* in the various provinces would be difficult. For these reasons, figures of consumption have not been Calculated.

We give below a table from the "Review of the Sugar Industry of India" by the Director of the Imperial Institute of Sugar Technology, Cawnpore, published in the Indian Trade Journal dated 2nd November, 1939, showing the net production of *Gur* (for direct consumption) in India, by Provinces and States.

TABLE NO. 22

Net Production of Gur in India by Provinces and States during 1936-37 and 1937-38

Provinces and States	1936-37	1937-38
United Provinces (including States)	2,408,000	1,875,000
Punjab	356,000	271,000
Bihar	50,000	55,000
Bengal	494,000	377,000
Madras	243,000	178,000
Bombay (including States)	212,000	179,000
North-West Frontier Province	66,000	64,000
Assam	34,000	33,000
Central Provinces and Berar	43,000	42,000
Orissa	43,000	52,000
Sind	9,000	10,000
Delhi	5,000	2,000
Mysore	39,000	32,000
Hyderabad	105,000	51,000
Baroda	3,000	3,000
Bhopal	5,000	3,000

We have also to observe that 409,067 tons of *Gur* were exported from the United Provinces, 128,508 tons from Bihar and Orissa, 24,772 tons from Madras, 22,347 tons from Bombay to other parts of India during the year 1936-37, and that 1,47,433 tons of *Gur* were imported into the Punjab, 1,32,067 tons were imported into Bengal 49,440 tons in the Central Provinces and Berar, 90,276 tons in Rajputana etc.

There is no carryover of *gur* like sugar. Whatever *gur* is produced, is available for consumption during the year. Almost all the Provinces, it will be noticed, produce the bulk of *Gur* needed for their requirements. The maximum production is of course in the U. P., and the next highest in Bengal and then Punjab, Madras, Bombay, Hyderabad etc.

Substitution of Gur by Sugar possible?

The consumption of gur has increased considerably during the last six years as compared with the consumption of sugar. Indeed, the continuance of the production and consumption of gur in India in such large quantities even in the face of all the modern methods of sugar refining is a remarkable feature of the national economy of the country and on that account is a question the study of which is bound to be of interest, and may indeed be amusing. It is also remarkable that the consumption of gur has not fallen, although it may be expected that with the improvement in the purchasing power of the people, the spread of the tea habit and the substitution of sugar for gur in the sweetmeat trade and the demand for a clean and white product from sugar-cane it would be likely to do so. The replacement of gur by sugar and the extent of such substitution will depend mainly on the level of prices of sugar and gur. If sugar becomes cheaper, most likely it may be preferred to gur to some extent and for some uses, but if sugar rises in price, people particularly in the villages—and 70 per cent of the population of India live in villages—will replace it by gur. Our view is that, as in the past, the consumption of gur and sugar will rise slowly with the improvement in the economic condition of the people and the reduction in the prices of both these products, but it is improbable that there will be any serious reduction in the consumption of gur, as a result of an increased consumption of sugar, for gur is a delicious food liked by the people and not easily substituted by sugar. It is not only a sweetening ingredient in food and drink, it is itself an article of food. (Also see Tariff Board Report page 55).

*Other Raw Materials for Production of Gur.**Palm-Jaggery a promising industry.*

Although gur is mainly manufactured from sugar cane, it is not the only raw material from which it is manufactured. Gur is produced from the sweet juice of four varieties of the palm, viz. Palmyra, cocoanut, sago, and wild date. Except cocoanut which requires cultivation, palms of other variety grow wild and no human nursing is necessary. There is a great possibility of development of the gur industry in Bengal both from the juice of the date palm and the palmyra palm.

Palmyra Gur.

Palmyra gur is produced in certain parts of the 24 Parganas, Howrah, Midnapur and Faridpur. But although there are palmyra

(tal) trees in large numbers in Burdwan, Bankura, Birbhum and Murshidabad districts, no *gur* is produced in these areas. There are distinct possibilities of palm-jaggery manufacture. Palmyra trees are in abundance in various parts of India, and millions of palms are wasted. They are nature's gift and with a slight effort it is possible to turn this waste into wealth. The manufacture of palm jaggery is not advocated as an industry competing with sugar cane jaggery. Both are village industries deserving equal attention and encouragement for providing employment and better diet for the people.

Tapping of Palm-Juice; Palm-Jaggery as good as Cane-Jaggery.

The method of obtaining juice from the palm is known as "tapping." Tapping is a delicate and complicated art and men are generally found conversant with this art in the areas in which the palms grow. These men are called tappers who are mostly engaged in toddy drawing. The method of tapping the trees is the same for toddy, and jaggery making. Besides a knowledge of tapping, two more things are essential for palm jaggery making: (1) to obtain an exemption from the excise tax for the trees to be tapped and (2) to know how to preserve the juice from fermentation. No one need suppose that the jaggery made from the sweet juice from any palm will be intoxicative. Chemical analysis of this jaggery has revealed that it has almost the same ingredients as possessed by jaggery made from the sugar cane juice. Lakhs of people are using this without any harmful effects in Bengal, and Madras Presidencies. (*Vide* article on potentialities of Palm-jaggery by Sjt. Gajanan Naik in the "Harijan" dated 10th July, 20th July, 21st August, 11th September, 18th December, 1937 and 14th May 1938). Sjt. Naik has also shown by a chemical analysis that jaggery made from palm juice is akin to sugarcane jaggery. Sjt. Naik also observes that in view of the advent of Prohibition sponsored by the Congress Ministries in the major Provinces, the problem of giving suitable employment to men who were till now engaged in drawing to-day from palm trees is now facing the advocates of prohibition. Real help can be rendered by the people to these tappers by directing their skill into a better channel. He also observes that even to-day palm-gur manufacture is not an extinct but an extensive industry in Madras and Bengal. In order, therefore, to harness the energy of the tappers to the palm-jaggery industry, the Provincial Governments should exempt the tapping of palms for the purpose of manufacturing jaggery from the excise tax. People should consume palm-gur and induce their friends, relatives and neighbours to do the same, and should try their best to

devise ways and means for establishing palm-gur making as a genuine village industry. Palm juice is of a light cream colour, is very pleasant to the sight, and to the taste. It has an excellent flavour and is marketed without difficulty.

In Segaoon, four miles from Wardha, the present headquarters of Mahatma Gandhi, there are hundreds of date palm trees. Having obtained permission from the Government to tap these trees, the All-India Village Industries Association has succeeded in producing a very wholesome quality of clean marketable *gur*.

Quantity of Palm-Jaggery in Bengal, and Madras.

The total quantity of *gur* produced other than that from cane is estimated at about 100,000 tons per year in Bengal. The palm juice *gur* manufacturing industry is an industry of some importance in Madras where the production is estimated at about 40,000 tons during a season.

*Cocoanut Palm-Jaggery**

Dr. J. S. Patel, Ex-cocoanut Enquiry Officer of the Imperial Council, recorded that a tapper can earn Rs. 54-6 in six months from 15 cocoanut trees, and about 40,000 cocoanut palms are tapped for jaggery making in the Madras Presidency.

Date-Palm Jaggery.

The average annual production of *gur* per tree is 21.25 lbs. 240 trees can be grown per acre, so that the yield per acre would be 240 by 21¼ lbs. equal to 2.3 tons of *gur*.

Prospects of Date-Sugar.

Date-palm can be grown at a nominal cost. The yield of Sugar is an absolute certainty, and the trees once grown yield sugar for 30 years on an average. The yield of sugar per unit area in date palm is much higher than in cane.

Nutritive Value of Gur.

We cordially welcome the All-India Village Industries Association which was established by the Indian National Congress under the guidance of Mahatma Gandhi in November 1934, particularly on account of the propaganda which that Association has undertaken

*(Vide Hartjan, Dated 10th and 17th July, 1937, article by Sjt. Gajanan Naik).

for the popularisation of *Gur*. The Association undertook this task not only on purely economic grounds of promoting a cottage industry but also because it was satisfied about the superior nutritive value of *Gur*. Mahatma Gandhi in the course of an editorial in the "Harijan" dated 13th April, 1935 observed :—

"Most undoubtedly people will be advised to use *Gur* for their milk and tea. They will be told, as they are being told, that it is superstition to think that *Gur* taken in milk or tea is injurious to health. One correspondent says that on his wife beginning to take *Gur* with her tea instead of sugar she lost her constipation. I am not surprised, because *Gur* has a mild laxative effect which sugar certainly has not."

In another issue of the "Harijan" dated 20th April, 1935, Lt. Col. Sumshere Singh writes about the properties of *Gur* as follows:—

"*Gur* has got the following average composition :—

Sucrose	63 per cent.
Fructose	19 " "
Insoluble matter	3 " "
Moisture	12 " "
Salts	3 " "

Sucrose is assimilated in the system only after it has been invested into fructose. On the other hand fructose is directly assimilated into glycogen. It is, therefore, clear that refined cane-sugar, which contains no fructose would take longer to be assimilated than *Gur*. Therefore, the nutritive value of *Gur* is about 30 per cent. superior to that of refined sugar.

The above note is self-explanatory as showing the superior nutritive value of *Gur* over refined sugar. The word sucrose above is in fact cane-sugar or refined sugar, i.e., the *Saccharam Purificatum* of the British Materia Medica.

The above composition of *Gur* was furnished to me by the Public Health authorities and is interesting enough in itself for me to pass on."

Gur, a wholesome Article of Diet

Indeed, it cannot be disputed that *gur* is a wholesome article of food. It has been on the daily menu of millions of our countrymen

since generations. As the nutritive value of *gur* is being brought to the notice of the people, it is expected that its consumption will show an increase. We might give a warning, however, that the production of *gur*, as it is carried on now is wasteful in many respects, and it will be advantageous in the national interests if suitable improvements were introduced in the manufacturing process of *gur*, for minimising the waste of raw material, increasing the extraction of sucrose, for producing it under more hygienic conditions etc., etc.

Necessity of improvement in village factories manufacturing Gur.

The importance of the Gur industry which consumes about 4 times the quantity of cane consumed by factories approximating to about 62 per cent of the total cane-crop, cannot be overemphasized. Any improvements in and development of the *gur* industry will be of great benefit to millions of cultivators, and should therefore receive careful consideration of the various Provincial Governments.

Many of the village factories are inefficient, leaving behind in the bagasse a considerable amount of sugar—often as much as 20 per cent of the total quantity. The difference in efficiency between the village process and a good factory is visible from the fact that from a given weight of cane, the factory obtains as much sugar (99½ per cent purity) as the village obtains *Gur* (80 per cent purity). In both cases, the amount of the product obtained is about 10 per cent of the weight of the cane: *Gur* 10 per cent Factory sugar 9.5 per cent and Khandsari sugar 5.5 per cent. It would be very helpful if village factories are set up with efficient mills for extracting the juice, vacuum pans for evaporation, and arrangement for clarification by filtering through charcoal. Thus better quality and higher yield can be obtained. We are glad to note that experiments for improving the making of *Gur* are being made in Bihar, Bengal, Punjab and the U. P. We are glad to find that the All-India Village Industries Association is taking a keen interest in the matter, since the year 1937.

Palm-Jaggery Production also Deserves Encouragement

We would recommend adequate encouragement for the manufacture of palm jaggery along with sugar-cane jaggery. Both are important village industries deserving equal attention and encouragement for creating employment and a better diet for the masses. The manufacture of palm jaggery has become important from another point of view also viz. of diverting the energy of the tappers into a better channel. This aspect has assumed a greater importance, parti-

cularly since the advent of the programme of Prohibition sponsored by the Congress Ministries in various provinces. Nature's gift of palms can also thus be utilised to the greatest advantage. Chemical analysis of jaggery made from palm has shown that it has almost the same ingredients as are possessed by the jaggery made from sugar-cane juice and indeed lakhs of people are using it with beneficent effects in the provinces of Bengal and Madras. No one need have any apprehension that palm jaggery would be intoxicative. It is as useful and harmless as the jaggery made out of sugar-cane, and, indeed, is equally delicious. Palm-Juice *gur* finds a ready market, owing to its flavour.

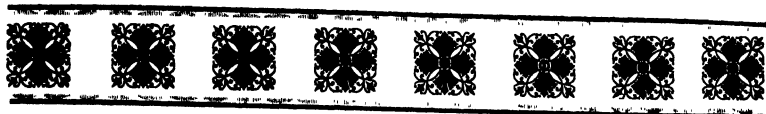
During the year 1939, since the introduction of the prohibition in several districts in Bihar, the Government of Bihar are making endeavours to manufacture Gur from palmyra juice. They expect that the experiment which is showing signs of progress will succeed in obtaining employment to the old toddy-vendors and be profitable to the owners of the trees also.

Effect of sugar prices on its consumption.

We have observed before that the consumption of sugar in the country varies from year to year with the price of sugar, the economic condition of the people and the price of gur etc. We might observe here that, contrary to the general belief, there has not been a notably large variation in the total consumption of sugar in the country from year to year, depending upon the basis of a rise and fall in the internal price of sugar in the country. Doubtless in a year in which the price of sugar has witnessed a considerable rise or fall, the consumption has certainly shown a tendency to fall or rise, but as we observed before, there has been no commensurately large increase or decrease. For instance, in the year 1925-26, when the yearly average price of Java Sugar at Calcutta was Rs. 10-15, the estimated consumption of sugar was 1,011,000 tons, and in 1931-32, when the price fell to Rs. 10 the consumption was only 9,82,000 tons. In recent years, there has been a progressive reduction in the price of Indian sugar, and in 1936-37, it reached the lowest level, lowest during the last quarter century, for which we have statistics available, or perhaps for a longer period still. The lowest level at which Indian sugar was sold ex-factory in 1936-37 was Rs. 5-14, but this was due to internal cut-throat competition, which made it unremunerative for the manufacturer to manufacture sugar. During the year 1935-36, the price was about Rs. 8 per maund, and it is remarkable that in spite of such a sharp

fall in the price of sugar in 1936-37, the increase in consumption was only of the order of 100,000 tons, i.e. about 10 per cent as compared with the previous year. In the following year, i.e., 1937-38, the average price of sugar went up to about Rs. 8 per maund, but the consumption, in our view, has not shown any remarkable fall. In 1938-39 the price of sugar sky-rocketed, and went up as high as Rs. 12 in March, 1939, and as a consequence of this, there has been an appreciable fall in the total consumption of sugar. We estimate the total consumption of sugar in India in 1938-39 at 966,000 tons. It may thus be observed that there is no such close relation in the Indian market between the price level and its total consumption, within limits. Doubtless, a fall in price will stimulate consumption, by bringing it within the reach of the poorer classes also, but a slight increase does not make a tremendous difference, particularly as those who are well-placed will have their usual quantity of sweets, whether the sugar sells at 0-4-0 or at 0-5-6 per lb. Even so, we do feel that in a country like ours, where the majority of the people are very poor, and who are forced to repress their natural inclinations for consumption of more sugar, due to its high price, there is a good opportunity for the expansion of the consumption of sugar with the lowering of price. The industry should keep this aim prominently before it, and should endeavour to reduce the price of sugar, and thus encourage the consumption of sugar in this country, for the benefit of the people as also of itself.

As a matter of fact, there are various other factors, which also influence the consumption of sugar in the country, viz., economic condition of the ryots and the general populace, the price at which *gur* (the consumption of which is 4 times as large as that of sugar) is sold at various places in the country, etc. In Table No. 23, on page 109. We have given the prices of 'Gur' for the last few years. The price of *gur* was higher in 1939, speaking generally.



PART II

Present Problems of the Sugar Industry, and Its Future Prospects.

Need for Regulation, Consolidation, and Organisation.

In the preceding pages, we have made a rapid survey of the course of the Industry during the year 1938-39. We have also referred to some of the chief problems now facing the Industry and have laid emphasis on the necessity of early attention to the same by the Industry. We are convinced that the time has now come when the industry must make strenuous efforts for setting its house in order, for consolidating its position and for establishing itself on stable, sound and scientific lines by attaining a high level of efficiency all round. The future of the Industry, it need hardly be stated, will depend greatly on the measure of success it achieves in solving the various complex problems now facing it.

Basis of Fixation of Cane Price in recent years.

The season under review, viz. 1938-39 has been responsible for a considerably lower production of sugar in the country due to a remarkably short season, a smaller area under cane, accompanied by a scarcity of cane, and poorer recovery as in some parts of U. P. Bihar and Bengal, where the quality of the cane deteriorated due to disease, drought, floods etc. We have already observed that the 1938-39 crushing season was the shortest on record. The minimum price of cane in U. P. and Bihar was fixed much higher than in the 1937-38 season when it was fixed at annas 0-5-3 per maund for the entire season, thus giving up the principle of varying the minimum price of cane each fortnight in accordance with the average price of sugar during the previous fortnight, which was adopted till 1936-37. When the Government announced the minimum price of 0-6-9 at the com-

mencement of the 1938-39 season, it was not known as to whether that price without any further variation, was to remain in force for the entire season, like the previous season or not. Later in the year, however, as the price of sugar increased, the Government of U. P. increased the price of cane to 0-7-9 per maund, and further still to 0-8-9 towards the end of the season. The Government of Bihar increased the price of cane to 0-7-0 from February, 1939. Although in 1937-38 the Governments of U. P. and Bihar had accepted the principle of fixing a single irreducible minimum price of cane during the entire season, they deviated from it in 1938-39. They also felt that if arbitrary changes in the minimum prices of cane at the discretion of the Government, which created an uncertainty in the position, were to be avoided, it would be desirable to revert to the old system of relating cane prices to current sugar prices from fortnight to fortnight which was in force from 1934-35 to 1936-37. The matter was referred to the Sugar Control Board who appointed a Sub-Committee and who recommended unanimously the adoption of a sliding scale for fixing the minimum price of cane. A reference has been made to this in the preceding pages where the schedule recommended by the Sub-Committee of the Sugar Control Board which met on June 18 and 19, 1939, is also given along with the scale finally adopted by the Governments of U. P. and Bihar after the matter was discussed at the Sugar Control Board Meeting, held in October, 1939.*

Fair method of correlating cane prices with sugar prices.

Whatever scale may be adopted ultimately by the Governments, it is necessary to ensure that fair average of the sugar prices is obtained for the purpose of determining the price of cane. The practice up to 1936-37 of calculating the average price of sugar from the average of the highest quotations of last day of the corresponding fortnight of the preceeding calendar month of all markets for first grade sugar in respect of 12 different factories situated in North Bihar having the highest price quotation on an f.o.r. Factory basis for Bihar, and of calculating the average price of sugar from the average of the corresponding

*A slight alteration in determining cane prices was made by the U. P. and Bihar Governments after the resignation of the Congress Ministries, in December 1939, whereby an allowance of 0-4-6 per maund of sugar was permitted due to the rise in the price of raw materials as a result of war, by deducting it from the average of sugar quotations before relating it to the price of cane. This is calculated to give some relief to the factories who pressed that a sum of 0-6-0 per maund at least should be permitted due to the increased cost of manufacture owing to the war.

fortnight of the preceding calendar month of the average for each day of that period of the 10 highest price quotations at Cawnpore for first grade sugar manufactured in the United Provinces for delivery by factories on an f.o.r. factory basis, in the United Provinces, should be revised. The Sub-Committee of the Sugar Control Board to whose report we have referred above, has however recommended that the basis of calculation of the sugar prices should be the same as in the previous sliding scale (i.e. of 1936-37).

It would be better and fairer however not to fix the price of cane on the averages of prices of sugar of factories of various groups in the market, and of the few highest quotations, but to base them on the average of the actual price received by a few well-distributed and representative factories in the two Provinces. The Syndicate can render useful help in this matter.*

Regional Prices of cane favoured in 1939

The Sub-Committee of the Sugar Control Board did not recommend the adoption of fixation of cane prices on a regional basis as they felt that factories in the West U. P. which received higher price for sugar than factories in the East or Central U. P. had higher cost of production owing to shorter season, lower recovery and higher wages. It was also felt that the existence of disparity in cane prices would create administrative difficulties at the border lines in the various regions. The Indian Sugar Mills Association and the Syndicate also disfavoured regional prices till 1938-39, but in November, 1939, the Syndicate urged fixation of cane prices on a regional basis, in consideration of fairness to all as some factories in West U. P. received higher prices for their sugar due to their advantageous geographical position, and were therefore well able to pay higher prices for cane.

*We are glad to say that on 7th December, 1939 the U. P. and Bihar Governments issued *communiqués* stating that they had decided not to alter the sliding scale, accepted for the purpose of fixation of cane prices for the crushing season 1939-40, but that after a careful consideration of the points urged by the industry, they had decided to alter the basis of calculation of sugar prices whereby the average of all available market quotations of firstgrade sugar would be taken for the purpose of sliding scale, in preference to the existing practice of basing the calculation of cane prices on the 12 highest quotations of firstgrade sugar in Bihar, and 10 highest quotations of first-grade sugar in the U. P., and that in calculating cane prices according to the sliding scale, an allowance of 0-4-6 would be made per maund of sugar on account of the rise in the price of raw materials as a result of the war, and that this amount would be deducted from the average of sugar quotations before correlating it to the price of cane.

Sugarcane—Necessity of Improvement in Cultivation.

The conditions of sugar production in India are peculiar and have hardly any parallel elsewhere. The manufacturers in India generally do not produce the raw material, viz., cane as they do in Java and other countries from their own extensive plantations round about the factories but they depend on a large number of agriculturists with small holdings of land independent of each other and working without any definite system, industrious but lacking in capital, in resources, and in scientific knowledge and consequently incapable, in the absence of any guidance either from the Government Departments or from the factory owners, of making use of modern, up-to-date and scientific methods of efficient cultivation, crop-rotation, manuring, etc. This is a very important factor which has to be borne in mind in a study of the problems of sugarcane and of agricultural improvements in India. Bombay is the only Province where factories grow cane on their own land.

Extension of Cane-Cultivation or Improvement?

The problem of the sugar Industry in India has always been and still is at bottom purely an agricultural problem and its solution is of vital improvement if the Industry is to be stabilised at an early date and placed on a sound economic basis. The area under cultivation of cane in 1937-38 viz. 38,165,000 acres may be considered sufficient for the production of sugar and Gur required by the country at present, and it is a moot question as to whether the entire attention of the Government, the industrialists and the cultivators should not be concentrated in the direction of improving the quality of cane and lowering of the cost of cultivation in preference to an extension of the area under cane. During 1938-39 the area under cane cultivation was reduced, but we hope that in future it will not fall below 38,000,000 acres.

Diseases in Cane and Pests must be eradicated.

The first problem is of the eradication of pests and of prevention of damage to the sugarcane crop caused either by the Pyrilla, leaf-hopper or redrot, smut, white fly or top-shoot borer. We are fully aware that in respect of the yield of cane per acre, its sucrose-content or average percentage of recovery of sugar from cane, we are still far behind many other sugar producing countries viz., Java,* Cuba, Hawaii and the Philippines. It is also certain that unless we are able to effect considerable improvement in this direction it will not be possible for us to stand competition with other advanced countries of

*The average yield of cane in Java in 1937 was 56.24 tons per acre, as compared with about 16 tons in India.

the world. What due to plantation of cane without a scientific system of rotation of the cane crop, what due to extended ratooning, what due to absence of manure and fertilisers, what due to lack of suitable, hardy and healthy seeds, what due to lack of plentiful supply of water either through irrigation or tubewells, and what due to diseases and pests, our cane crop is poor both in respect of yield and of quality. *The direct consequence of this is the high cost of production of cane per acre, and a great national loss, valued at millions of Rupees to the agricultural community in the country.*

In addition to these causes, considerable harm is occasionally done to the crop by insect damage as happened three years ago in the western U. P. and the Punjab due to the leaf-hopper and pyrilla, the infestation of cane crop in Bihar and U. P. due to the moth-borer, and in the 1935-36 season due to the top-shoot borer and smut in several places in the U. P.

In October, 1939, there were reports regarding the cane crop in some parts of U. P. having suffered from pyrilla, in other parts from red rot etc. It was also observed that the ratoon crop had suffered extensively from red rot. A reference to the wide-spread damage done by red rot was also made at a meeting of the Sugar Control Board held at Lucknow on the 7th October, 1939 when it was suggested that the Provincial Government should take remedial measures for eradication of the infected crop as soon as possible, for prohibition of ratooning of crops in the infected areas etc.

Pyrilla Pest in Bihar.

The Government of Bihar also issued a Press Note in September, 1939, referring to the possibility of outbreak of pyrilla. It was observed that "the last bad outbreak of pyrilla, the sugar-cane leaf-hopper in the North Indian sugar cane tract was in 1937. Since pyrilla has shown a tendency during 1939-40, it is necessary to take prompt action to prevent any extensive outbreak in the 1940 crop." Records show that pyrilla as borer pest appears once in 4—5 years. Since the last outbreak was in 1937 the years 1940 and 1941 should be considered dangerous years for damage to sugar cane by pyrilla. The recommendations of the Agricultural Department of Bihar for immediate action comprise

- (1) widespread publicity among growers and
- (2) giving directions to them to collect and destroy immediately all leaves showing signs of attack by pyrilla and to avoid ratooning as far as possible in 1940.

Damage to crop by insects

We observed in our 1938 Annual that the Director of Agriculture of U. P. had stated at the Sugar Committee of the Imperial Council held in March 1937 that he had estimated the damage by borer infestation in U. P. to be about 40 per cent.

The damage thus caused to the cane crop by insects is so serious that it merits immediate attention, and owing to the enormity of the task and the cultivation of cane being in the hands of small holders of land, we feel that the problem could be tackled successfully, only if the Provincial Government would appreciate the importance of this question, and appoint a few expert Indian Entomologists for this purpose. Being vitally interested in the success of the Industry, it is the duty of the sugar mills as well to make use of every opportunity of bringing these facts to the notice of the authorities of the Agricultural Departments in each Province who in turn should take prompt steps for carrying on suitable research work into the problem of eradication of pests with a view to preserve and promote the interests of cultivators as also of the manufacturers.

We find from Mr. A. Caws' paper on the Quality of sugar cane in Northern India in relation to borer infestation and disease infection, before the 8th Annual Convention of the Sugar Technologists Association of India held on the 9th September, 1939 at Cawnpore, that the quality of sugar cane grown in Northern India was found to be infested with borer and disease to a great extent. During February, 1939, survey was conducted in nine sugar factories in North Bihar and the Eastern United Provinces and whose operations were controlled by Messrs. Begg, Southerland & Co., Ltd., Cawnpore.

Only nine factories participated in the survey for borer and disease during February, 1939; the degree of infestation was varying at the various factories. The writer of the paper concludes that it would appear justifiable to assume that a considerable increase in disease infestation has been evident during the past season as compared with the two previous seasons. The enormous loss of sugar amounting to some 50,000 maunds in nine sugar factories is serious especially in view of the increase in cane prices. It should therefore be impressed on all growers of cane that apart from the loss of revenue to themselves by rejection of badly infested supplies, the loss to the industry in general may mean the approach of a limit at which factories can no longer operate. The consequences of this state are too obvious to

* Vide "Agricultural and Live Stock in India" September, 1937 and September, 1938.

enumerate and it is therefore in the interests of all concerned to do as much as possible to eradicate the disease.

The figures for the loss of sugar due to borer and disease experienced by a group of nine sugar factories situated in North Bihar and Eastern United Provinces may be calculated per 100 maunds of cane milled, as approximately 1.3 maunds. There are about 65 sugar factories operating in North Bihar and Eastern U. P. and assuming each factory crushed an average crop of 2,000,000 maunds of cane, the total loss may be estimated at some 17,00,000 maunds of sugar. This figure may be compared with that recorded for 1938 when, due to the lesser extent of borer and disease infestation, the figure can be calculated as about 12 lakhs maunds of sugar lost due to borer and disease in North Bihar and Eastern U. P. The losses to the Government revenue by reason of the lower yields may be easily calculated, but the loss to the cultivator is obscure except in those cases where the entire crop was burnt or disposed of in other ways.

Education of Cultivators by Demonstration of Improved Methods.

Apart, however, from this immediate and important task of research work in connection with the problem of pests, there is a great necessity of undertaking other measures which would bring home to the cultivator the necessity and the desirability of effecting improvements in the conditions of cultivation of cane. The average cultivator in India is hardly aware of the latest improved methods of farming or manuring or crop rotation or selection of varieties suitable to the soil, and he simply carries on the old and traditional methods of cultivation from year to year without worrying about the importance of effecting any improvement in the quality or the quantity of the cane grown on his fields. *Sugar-cane crop is one of the most important crops of the country, the annual value of which has been estimated at over 60 crores of rupees, and the prosperity of this second largest industry of the country is closely linked with it.* Apart from this, as the Provincial Governments are aware, the growth of the sugar industry adds substantially to the resources of the ryot and even in the midst of a period of depression it has enabled him to pay his rent or land revenue, his irrigation dues, and other taxes. It is therefore the duty of the Government to devise suitable means of imparting instruction in modern methods of cultivation to the ryot and to make available to him the fruits of organised research with a view to improve his economic condition, and also to put the industry on a sound basis. Although it is satisfactory to note the work done in this connection by the Sugar-cane Research Stations at Coimbatore, Shajahanpur,

and Muzaffarnagar, Karnal, Padegaon in the Deccan Canal area, Mushari (B. & O.), Pusa, Dacca, Mysore, the Jorhat Experimental Station in Assam, at Risalewala and Jullundur in the Punjab, at Bangalore, Anakapelli, Madras, Hyderabad and other places, and although improvements are slowly being effected in the quality of cane grown in the various provinces, we feel that the time has definitely arrived when we should redouble our efforts to establish more intimate contact with the cane-cultivator and to initiate him into modern methods of better farming by actual demonstration. For this purpose it is essential to establish a series of demonstration farms and nurseries in all cane-growing provinces in order that they may devote their energies to the propagation of cane of higher sucrose-content, of higher tonnage, of early and late-ripening varieties for the extension of the crushing season, of increasing the yield by suitable crop-rotation, by provision of a suitable supply of water through irrigation or tube-wells, etc. These demonstration farms and nurseries should also serve as centres from where trained agriculturists would tour round the surrounding districts in order to show or demonstrate efficient methods of cultivation and manuring suitable to the soil in the various places and would distribute disease-free seed amongst the cultivators. An important function of these farms would be to conduct researches as to the methods of combating cane diseases and pests. In addition to the establishment of such farms, it is also necessary for the Provincial Governments to undertake other allied works of effecting improvement in the cane cultivation by educating the ryot in the use of irrigation water, by providing better facilities of irrigation, by extension of the canal system, and by affording suitable assistance in tapping the subterranean sources of water supply.

Improvement of Cane Crop.

The immediate necessities for the cane crop of India are improvements aimed at lowering the cost of cultivation, as for example, by increasing the tonnage per acre which in turn will give a better return to the cultivator and (2) raising its quality e.g., by producing varieties having higher sucrose content and greater resistance to diseases and pests so that it may command a higher price from the sugar manufacturer and produce a larger quantity of *gur* for the same weight of cane. Steady work of improvement may immediately be taken in area adjoining sugar factories which have been reserved and assigned for the sugar factories in accordance with the Bihar and U. P. Sugar Factories Control Rules, as they are likely to give immediate benefit both to the manufacturer and to the

cane grower. We might also observe that the ultimate success of the industry hinges upon the availability of suitable quality of cane at considerably lower prices than at present and that this can only be achieved by comprehensive research work in the production of sound, healthy and disease-free canes with plenty of sucrose content, and the extension of the cane-crushing season from about 4 months as at present to at least 7 months in the year by encouraging and promoting the growth of early ripening and late-ripening varieties of cane suited to the climatic conditions of the various areas of production.

Valuable Educational Effect of Cane-crop.

Sir John Russel, F. R. S. a distinguished British Scientist, in his Report on the work of the Imperial Council of Agricultural Research in applying Science to Crop-Production in India published in October, 1937, observed that the Imperial Council can justly claim credit for the great success in its activities in connection with the production and utilisation of the cane crop. We may observe here that although the total area under sugar cane is only about $3\frac{1}{2}$ million acres out of 227 million acres cultivated, in India, the importance of the sugar cane crop is out of all proportion to the area which it occupies. In so far as the cultivator is concerned, sugarcane has a valuable educational effect. In the words of Sir John Russel, "He learns the advantages of modern varieties of crops, of fertilizers, of proper cultivation; the need to watch for plant diseases and to seek advice when he is in difficulties. The Agricultural Officer has more chance to getting into touch with a sugarcane grower than with an ordinary small cultivator. From the national point of view, India is a heavy consumer of sugar including *gur*, of course, standing second amongst the nations of the world and being surpassed only by U. S. A.."*

Inter Provincial Cane Research Organisation for U. P. and Bihar

In connection with the question of cane development, the Sub-Committee of the United Provinces Sugar Control Board held at Naini Tal on 17th June, 1939 came to the conclusion that it was desirable to have an Inter Provincial Organisation of the United Provinces and Bihar which would deal with the problems of cane research in a comprehensive fashion. After a very careful consideration of the question, they came to the conclusion that an Inter-Provincial Committee of scientific experts and representatives of growers and manufacturers

*The consumption of sugar in the U. S. A. in the year 1934-35 was estimated at 5,870,000 metric tons, in the United Kingdom at 2,28,3,000 metric tons and in British India at 3,350,000 metric tons.

together with the Government representatives should be constituted, whose duty it would be to lay out a common research programme and to supervise the execution of it from time to time. It was observed that it was possible that the Committee suggested above should develop into an inter-provincial cane committee on lines similar to those of the Indian Central Cotton Committee or the present committee of the Imperial Council of Agricultural Research. The recommendations of the Committee, briefly, were as follows:—

1. to have a central research organisation at Shahjahanpur with research stations at Muzaffarnagar, Gorakhpur and Pusa;
2. that the research in cytology and genetics in testing of seedlings and varietal multiplicity and parasitology should be concentrated at the Central Institute.†
3. That facilities for studies of insect pests should be provided at Muzaffarnagar and Gorakhpur in addition to the existing facilities for varietal trials; and that the sub-station at Pusa, besides doing varietal and entomological studies, should be developed into a subsidiary breeding centre and that research station dealing with the special problems of eastern U. P. and North Bihar;
4. that problems of pedology and sugar technology should be dealt with at the Cawnpore Agricultural College and at the Imperial Institute of Sugar Technology;
5. that an Inter-Provincial Committee should be constituted to draw up a research programme and to examine its working from time to time;
6. that factory farms should be utilised for purposes of varietal tests, and that these farms should be under proper scientific and technical control of the Government; that the Government should enable the factories to acquire these farms and furnish them with technical assistance and supervision.
7. that the statistical section should be immediately strengthened with a view to advise proper layouts of experimental farms, including those of the factories, and to analyse the results already available;

†At the meeting of the Sub-Committee held at Lucknow on the 5th and 6th October, 1939 this recommendation was altered as follows:—

“Should be carried out at the Central Institute or at Pusa as may be considered desirable.”

8. that the Central Research Organisation should work in the closest co-operation with the Imperial Institute of Agricultural Research and particularly the Research Station at Coimbatore.

In regard to the development work, the Sub-Committee were of the view that the directions in which work had to be intensified was in the sphere of providing greater facilities for manure and irrigation. The cost of seed, manure, and irrigation, as was pointed out by Mr. Srivastava, amounted to about 27-30 per cent. of the total cost of production. It was suggested that sugar factories and cultivators should combine in making greater use of press and sweepings from the factories and pan manure. Emphasis was also laid on the necessity of irrigation, especially in areas where canal irrigation was not available.

Imperial Council's Commendable Work for Industry.

The Imperial Council of Agricultural Research from its inception had in hand a programme for implementing the Government's decision to foster the production of white sugar in India. This programme was in three parts: (a) the selection of cane better suited to the important cane growing districts than the existing local varieties and the improvement of their cultivation (b) the improvement of local methods of making *gur* and (c) the development of an advisory and research service for the sugar factories. As has been pointed out above, the selection and breeding work has been accomplished with great success. Investigations on the breeding of sugar cane started by Dr. Barber have been developed with great success by Rao Bahadur T. S. Venkataraman who has also invented many devices for overcoming various experimental difficulties.

Besides the plant breeding work proceeding at Coimbatore, a special method involving mutilation or destruction of some of the chromosomes by X-rays is being tried by Dr. Badami at Bangalore and irrespective of whether this produces better sorts or not, it promises to give new material of value to the breeder. The area under improved varieties occupies a very large proportion, no less than 75 per cent. of the area under sugarcane, and this is larger than for any other crop. It will be more helpful if a simplified form of experiment including practical combination of varieties, irrigation, manuring etc. would be tried on the land belonging to the cultivators. Conclusions drawn from experiments at Research Stations would be greatly strengthened if they are confirmed on other farms also.

Imperial Council's Booklet on Sugarcane Research Results.

During the year 1938, the Imperial Council of Agricultural Research published a small booklet called "A Summary of Some Practical Results of Sugarcane Research in India." In regard to the present position of sugar varieties in the different Provinces, we find that the Sugarcane cultivation in U. P. is dominated by the Coimbatore production which cover about 90 per cent of the area. Co. 213 occupies the dominant position being grown over 60 per cent. of the cane area in U. P. Co.-290 and Co.-244 are the next favourites, and cover each about 6 per cent. of the total cane area. In Bihar also the universal cane is Co.-213, Co.-210 is a close competitor to-day, the relative areas of these two canes varying with the prevailing season. Co.-299 as "early" cane, Co.-313 as "mid-season" cane and Co.-331 as "late" cane are beginning to spread in Bihar. Of the major sugarcane growing provinces in sub-tropical India, the Punjab is one in which the Indian indigenous canes are cultivated over fairly large areas, as much as 50 per cent. of the total sugarcane area in the province. Co.-213 is now the dominant cane in Bengal, occupying about 80 per cent. of the total cane area and is steadily replacing "Tanna," which once covered large areas. In Bombay the dominant cane near the environs of Poona and the Decent Canal areas is Pundia. This variety has been holding the field for a long time and over a decade back the opinion was held that for Bombay conditions Pundia was hard to beat. Recently, however, after the starting of sugar factories, the two Java canes P. O. J. 2878 and E. K. 28 were the first to successfully replace Pundia in the estate plantations. The Madras Presidency is entirely a tract for the tropical or the thick type of canes. Among the promising canes of the future are Co.-413, 419 and 421. In Mysore, the dominant cane is H. M.-320, and others are H. M.-544, H. M.-553, and H. M.-602. Mysore is perhaps the only State where Coimbatore canes have not become dominant.

Improvement in Yield possible in India.

While the yield of great tracts of the main sugarcane producing Provinces was still far from satisfactory as compared with the yields got, say, in Java, it is definitely proved from the work of the Indian Research Stations as also from the experience of factories growing canes that high yields are possible. Experiments conducted with Co.-360 and POJ-2878 at three sugar factories, one Government Farm and three cultivators' fields in different parts of Deccan-Canal area, in 1935-36 showed encouraging results. On the Ravalgaon Sugar Factory 50.5 tons of the former and 41.4 tons of the latter was the

yield per acre. In a competition organised by the Maharashtra Chamber of Commerce in 1935-36 yields of 80 to 100 tons of cane per acre were obtained without any reduction of sugar. In Mysore, in 1935-36, H. M. 320 yielded as much as 36.86 tons per acre while H. M.-606 yielded 51.88 tons per acre and H. M.-607 yielded 50.40 tons per acre.

Rotational Trials.

The following up of a cane crop too closely by another cane crop tends to exhaust the land. Green-manuring the land with *San* previous to sowing the crop supplemented with additional manuring with nitrogen in the form of cake or Ammonium Sulphate at the time of planting has generally been found useful.

Ratooning.

Ratooning is a subject on which there has been a good deal of controversy, particularly since there is some evidence that ratooning causes an increase in insect pests. The period of profitable ratooning varies greatly in different localities and depends on the soil, variety and the treatment which the crop receives. Ratooning as at present practised has acquired a bad name, perhaps because the crop is often neglected. Canes differ to some extent in their performance as plant canes and as ratoons. On the whole thin canes are better suited for ratooning than thick canes although thick varieties have also been found to ratoon well in certain places. This subject was discussed at the Sugar Committee meeting in July, 1936, where it was noticed that opinions* of Directors of Agriculture, of factory owners and of cultivators were divided as to the increase of insect pests in cane as a result of ratooning. The question is under further examination by scientifically planned experiments. The matter is at present receiving the attention of the Imperial Council of Agricultural Research. The view generally held, however, at present seems to be that first ratooning is all right. Ratooning of cane crop beyond one season does not find much favour amongst the factory owners.*

It is now being realised that ratoons are easily susceptible to diseases and should be discouraged as much as possible. In fact, as a result of the red rot in 1939 in U. P. the ratoon crop in some areas had been entirely wiped out.

Use of Molasses and Press Mud as Manure.

Experiments have been carried out in the United Provinces for improvement of land by Molasses and Press mud. A reference to this

*For a detailed discussion, vide *The Indian Sugar Industry Annual*, 1937, pages 69-73.

was made by Professor N. R. Dhar of the Allahabad University at the 8th Annual Convention of the Sugar Technologists Association of India. Some of the results may be given below.

A 6 per cent. increase in yield was reported in the sugar cane at Shahjahanpur Government farm on applying 10 tons of Molasses per acre. But where Molasses was added to the growing crop no beneficial result was obtained. Messrs. Parry & Co. of Madras have obtained an increase of 40 per cent. Molasses would be useful in improving the yield of sugar cane when applied 4 to 5 weeks before the sowing at the rate of about 5-10 tons per acre. Molasses has also been used for reclaiming Usar land near Cawnpore, Allahabad and in Mysore. By the application of Molasses at the rate of one to ten tons per acre good crops of paddy and barley have been grown in these reclaimed areas where no vegetation ever grew. The amount of Molasses necessary for reclamation depends on the quality of the alkali soil. It is estimated that the total area of usar land in U. P. alone is more than 50 lakhs acres. In the Punjab, in Bihar and south of India there are vast tracts of such unproductive lands. Naturally the reclamation of such lands is a problem of great importance to India. The cost involved in reclaiming usar land by treatment of Molasses appears to be less than what it is with either gypsum or sulphur. In the above paper Dr. Dhar suggests that molasses should be used as manure for the cultivation of paddy and sugarcane, and that the Agricultural Department should go ahead with alkali land reclamation by the application of molasses and grow paddy and barley in the reclaimed lands. He states that he has not conducted specific field experiments on the use of molasses in the reclamation of alkaline soils but from observational results he has formed the opinion that they will do very well as correctives for alkaline lands which are not too alkaline and in checking alkalinity.

Irrigation.

Just as with manures so with irrigation there is great variation in practice due to variation in soils, rainfall and the price of irrigation water. Co.-213 and Co.-223 responded to liberal watering more than Co.-285, Co.-312 and Co.-313. Former varieties might therefore be grown more advantageously in localities having ample irrigation facilities. Hot weather irrigation of cane also results in higher cane and sugar yields.

Irrigation between the closing of the cane crushing season and the beginning of the monsoon is particularly useful.

Diseases of Sugarcane.

The common diseases of the sugarcane crop are mosaic, red rot and fungal and bacterial diseases such as smut and stinking rot. Red rot is now no longer of importance since the process of set selection eliminates any danger from this disease. The disease to which the greatest attention has been given in recent years is the so-called mosaic disease. It is a virus disease producing pallor and mottling of the leaves. It is now known to be capable in some countries of great reduction in yields.

Pests may be divided into two groups according to the nature of the damage they do, i.e., 1, External pests, e.g., (i) white ants (ii) white fly and (iii) *Pyrilla* and 2. Internal, i.e., moth borers affecting the top shoot, stem and root and are named after the portion of the plant to which they cause damage. White ants are one of the greatest enemies of sugarcane and cause considerable damage. Their ravages begin as soon as the cane sets are planted. Their attack can be easily differentiated from other pests by the fact that the plants infested with white ants begin to dry up. In the United Provinces, copious irrigation, application of crude-oil emulsion in irrigation water at the rate of 5 seers per acre, application of neem cake (20 maunds per acre) applied a fortnight before sowing and limewash as an over-night dip gave considerable protection.

Pyrilla does a considerable damage to the sugarcane crop. Experiments at Muzaffaranagar showed that it was capable of reducing the sucrose content of the juice by about 2½ per cent., or even more.

There is a danger of outbreak of *pyrilla* in 1940-41 according to the Agricultural Department of Bihar.

Of the internal pests, i.e., borers, the three important ones are top-shoot, the stem and the root-borer. The damage done by these borers is very considerable.*



Tube-well Project in U. P.

The first extensive tube-well project in this connection has been sanctioned in the U. P. seeks to provide irrigation facilities in the dry canal irrigation is not possible. They represent an investment of 52 lakhs of rupees. This project will command nearly 1½ million acres

*For details, vide "Summary of some practical results of Sugarcane" Research in India, published by the Imperial Council of Agricultural Research, 1938.

which will now be fully protected. About 1,300 tube-wells are now working and each one has been so located that it can command an area of 2 square miles with an approximate average of 1,000 acres of culturable area.

Allocation of Sugar Excise Fund for Improvement of Cane

In his budget speech of 1934, Sir George Schuster, the then Finance Member of the Government of India announced that an amount equivalent to anna 0-1-0 per cwt. of sugar assessed to sugar excise duty would be set apart to form a fund to be distributed amongst the provinces where white sugar is produced for the purpose of assisting the organisation and operation of co-operative societies among cane-growers so as to help them in securing fair prices or for other purposes directed to the same end. The amount which have been allotted or earmarked for various Provincial Governments out of the Sugar Excise Fund, as also the general titles of the schemes financed from these sums during the year 1934-35, 1935-36, 1936-37, 1937-38, and schemes which may be financed from these sums during the year 1938-39 are shown in the following Table:

TABLE NO. 23

Grants sanctioned out of the Allotments made from the Sugar Excise Fund, and the Approved Schemes on which they are being spent.

To	1934-35 and 1935-36 Rs.	1936-37 Rs.	1937-38 Rs.	1938-39 Rs.	Approved Schemes
U.P.	5,40,000	4,76,000	7,20,000	4,80,000	<ol style="list-style-type: none"> 1. Administration of the Sugarcane Act, 1934, and the Rules framed thereunder. 2. Co-operative marketing of sugarcane. 3. Renewal of seed in areas affected by frost. 4. Development of cane cultivation in tubewell areas.
Bihar	1,51,383	2,46,590	3,42,000	2,32,000	<ol style="list-style-type: none"> 1. Working of the Sugarcane Act, 1934, and the Rules framed thereunder. 2. Improvement of sugarcane cultivation. 3. Organisation and operation of Cane-growers' Co-operative Societies. 4. Expansion of the Sugarcane Improvement Scheme. 5. Acquisition and working of Musheri Station as a sugarcane seed nursery.

To	1934-35 and 1935-36 Rs.	1936-37 Rs.	1937-38 Rs.	1938-39 Rs.	Approved Schemes
Bombay	15,466	25 500	42,000	36,000	1. Organisation of Co-operative Societies for the supply of sugarcane to factories. 2. Grant to these Societies of subsidies for the entertainment of expert staff and purchase of improved types of seed. 3. Financing a portion of the Padegaon Research Scheme.
Punjab	21,160	25,500	18,000	12,000	1. Establishment of Cane-growers Co-operative Unions to improvement of cane Cultivation and co-operative marketing.
Burma	15,415	17,000			1. Free supply of improved Java cane varieties to selected cultivators. 2. Free supply of fertilisers. 3. Propaganda on improving methods of cultivation.
Orissa	...	5,000	6,000	4,000	Improving the standard and quality of cane by introducing improved methods of cultivation.
Bengal	...	25,500	30,000	20,000	Organisation and operation of Co-operative Societies among the cane-growers.
Madras	...	31,500	42,000	16,000	Organisation of Co-operative Societies and improvement of varieties of cane grown in factory areas.

The Governments of U. P. and Bihar have drawn up schemes with the primary object of effecting improvements in the cultivation of cane on which the grants made by the Government of India out of the Sugar Excise Revenue are being spent.

U. P. SCHEME OF CANE DEVELOPMENT.

We give below extracts from a short official summary in regard to the progress of the Cane Development Scheme, Reservation of areas and for improved means of communication in the areas serving the sugar factories in the U. P. in 1938-39.

The Cane Development Scheme was started towards the end of 1935 with the help of contribution from the Government of India. The Scheme contemplated the establishment of co-operative better farming and marketing societies in the whole areas of factories. In 1935, 22 factories joined the scheme, in 1939 almost all the factories in the U. P. have come under the scheme. The reason of the scheme gathering impetus lies in the decision of the U. P. Government to

develop the areas of the sugar factories without asking them to contribute towards the cost of the scheme. Up to 1938, there were two kinds of Zones—(1) Contributory, in which the factories were required to contribute from Rs. 3,000 to Rs. 6,000 per zone, the rest of the expenditure being met by the Government, and the (2) Non-Contributory in which the entire cost was borne by the Government. In 1939, all the Contributory zones have been converted into non-contributory and now the entire cost of the development of cane in these zones of all the factories is borne by the Government. The cost of the entire scheme is estimated at about Rs. 11,00,000. The area under developed cane is increasing from year to year. The zone comprises of about 200 acres and takes 3 years for it to expand to its full size of about 2,000 acres. The existing 136 zones are under various stages of development. When all are fully developed, there would be about 3 lakhs acres under developed cane, an area which would be able to supply between 10 to 11 crores maunds of cane to the factories, whose normal total requirements of a season seldom exceeds 16 crore maunds. The main objects of the Cane Development Scheme are the (1) replacing of old varieties of cane by new improved varieties and the (2) introduction of better manuring practice and better methods of cultivation. During the year 1939-40, the introduction of new varieties of cane was then on a large scale and in many localities about 40 lakhs maunds of seeds of new varieties of cane were distributed as against 19 lakhs maunds in 1937-38. The Cane Development work in the areas of sugar factories has been carried on through Co-operative Societies called the Cane Development Co-operative Societies. In addition to the development of cane, these societies have also taken up the work of the supply of cane of the developed areas and in certain case also of areas which lie contiguous to the areas under the scheme. These societies attempt to provide regulated and assured supply of cane to factories. Considerable difficulties were found in the matter of supplies during the last short season. The total quantity of cane supplied by them during 1938-39 amounted to 4.68 crore maunds out of a total of 9.58 crore maunds crushing by factories, i.e., nearly 50 per cent of the total supply of cane. In the Western Range, the Society supplied as much as 65 per cent of the cane crushed by the factories. The official note states that much remains to be done and objects like increasing the yield of cane per acre, including the sucrose per centage of cane, prevention of exhaustion of the soil and revitalising it where it is already exhausted require patient and hard work. It is suggested that this goal could be reached quicker if the factories render material assistance by pro-

viding greater assistance by giving official help to their members, for using improved methods of cultivation, arranging for stocking and distribution of fertilisers and implements and by maintaining model farms for varietal manurial experiments and multiplication in early stages of seed of the new varieties.

Reservation of areas for factories in the U. P.

The U. P. Sugar Factories Control Act provides for the reservation and zoning of areas and since 1938 the system of reserving areas at the most between 60 and 80 per cent of factories, requirements in was enforced in the whole of the Province. The reservation was done after full consultation with the factories and three factors were taken into consideration for determining the requirements of the sugar factory.

- (1) The amount of cane crushed in each of the last three seasons,
- (2) The period during which it crushed that amount, and the area likely to make the amount fixed for the factory available for it,
- (3) How much area would be likely to make the amount fixed for a factory available to it.

During the last season due to a smaller area under cane, all factories were required to accept a slight decrease in the amount of cane to which they were entitled.

The U. P. Sugar Factories Control Act contemplates the reservation of areas from year to year. Last year the areas were reserved for sugar factories for one year only, but it was felt that year to year reservation leave the factories uncertain of the future and that if the factories were to be encouraged to develop cane cultivation, certain areas should be assured to them permanently so that they may try to improve their areas in the hope that they would be able to enjoy the fruits of their industry and expenditure for a number of years. In 1939-40, therefore, the general policy of the Development has been to have two kinds of reservations:—Pucca reservation and (2) Year-to-Year Reservation. As under the Act, it is not possible to reserve any area for more than one year, it has been proposed to let a certain area or areas remain with the same factory for the remaining period of duration of the Act by repeating each year the same reservation orders in respect of such areas. The growers of such areas will be given a guarantee that the factory for whom the area has been reserved will take all their cane. To that end, an area which can at present supply

at the most between 60 and 80 per cent of factories' requirements in their undeveloped or semi developed condition has been given to it as its Pucca area. The Year to Year Reservations may be with one factory for one year only and with another the next year, and will be 'distributed' among the factories according to the needs.

Zoning of Cane-areas for Factories in U. P. and Bihar

One of the chief objects of the Sugar Control Acts of U. P. and Bihar was to provide for a scheme of zoning to sugar factories. In order to improve the supply of cane and ensure its development, it was felt that no factory could afford to spend money for developing cane in an area unless some sort of protection is given to it against other factories taking away the cane from the areas developed by a factory. Under these Acts, the Cane Commissioner, after consulting the Advisory Committee and the factories, is empowered to declare any reserved area for purposes of supply of cane to a particular factory, during the cane crushing season. The factory is bound under the Act to purchase all the cane offered by the Canegrowers from the areas reserved for the factory.

The Bihar Sugar Factories Control Act provides that a reserved area should not supply more than 50 per cent of the factory's requirements and that the assigned area may supply to the extent of additional 15 per cent. Thus, between them they can supply not more than 65 per cent of the factories' entire requirements. The United Provinces, Control Rules however do not contain such a provision and the practice there is to classify the Reserved areas into (1) Pucca Reservation and (2) Kutchha Reservation which latter is liable to be changed from season to season. We feel that in order to ensure a rapid development of cane, areas should not be altered from season to season and such reserved areas should be given to factories that they can get from them, at present, about 70 per cent of its total cane requirements. If this is done, the factories will be able to develop the areas and to ensure that all their cane is available from such areas slowly in course of time. Just as factories are compelled to purchase all the cane grown in the reserved areas, the growers also should be compelled to sell their cane to the factory in their area, and should be prevented from taking cane for sale outside the reserved area. This is only fair and equitable.

Development of Communications

The U. P. Government formulated in 1939 a comprehensive plan of road development, and they invited suggestions from factories

regarding the construction and improvement of road development, which they thought to be necessary to facilitate cane traffic from fields to factories. The whole programme of road construction has been estimated to cost roughly 156 lakhs of rupees. Out of this 66 lakhs (Provisional estimate) will be spent on roads which will serve the existing sugar factories and sugarcane areas. The percentage of the whole programme in the interest of the sugar industry comes to 42. The total length of mileage of the proposed roads is 1,362 of which roughly 544 miles will serve the purposes of the sugar industry—a percentage of 40 to the whole mileage.

In addition to the above expenditure sanctioned by the Provincial Government, the Government of India have approved a proposal that a suitable grant of Rs. 3,000 to Rs. 5,000 may be made on a contributory basis to each Cane Development Co-operative Organization operating around the sugar factory for the improvement of communications and means of transport. The total amount placed by the Government of India at the disposal of the U. P. Government for this purpose is one lakh. The funds at the disposal of each factory will be utilised by a Committee consisting of representatives of growers and of the factory under the supervision of the Cane Development Officer. A number of Dunlop tyred carts have been purchased out of this fund and they are either let on hire to society members or have been given to Society Unions on a basis of 50: 50. The note says they are definitely economical but it is not very certain yet whether they will be successful on bad village roads where the ruts are very deep and irregular.

In Gorakhpur District there is a Road Development Fund in each zone. The growers contribute three pies per cart of cane brought to the factory while the factory contributes half the amount. The income from this fund was about Rs. 35,000 in 1937-38 and Rs. 15,000 in 1938-39.

It remains to be seen whether it will be for possible for the Government to maintain its programme of roads, as a result of the out-break of the European war, in September, 1939.

Cane Advisory Committees in U. P. and Bihar

Since 1938, the Bihar Government have constituted Advisory Committees for the Province of Bihar and also for the districts of Saran, Champaran, Muzaffarpur and Darbhanga, for Purnea and Bhagalpur Division, (excluding Purnea), and for Patna Division. These Advisory Committees have non-official secretaries except in Purnea

and Patna Division. These Advisory Committees have non-official secretaries except in Purnea and Bhagalpur Division. These Committees have been constituted under Section 3 of the Sugar Factories Control Act. The Committees have important functions, including advising the Government and its officers in regard to the regulation of the purchase of cane, advising the Cane Commissioner with regard to cane estimates and the determination of reserved and assigned areas etc. No such Committees were been appointed by the U. P. Government, till September, 1939. In November 1939 the U. P. Government also appointed such Advisory Committees in suitable areas, as has been done in Bihar.*

Bihar Cane Co-operative Societies' working in 1938-39

We have observed before that about half the quantity of cane required by the factories in the U. P. were supplied through the Cane Co-operative Societies during the 1938-39 season. We may now review the working of the Canegrowers' Co-operative Societies in Bihar based upon an official note of the Co-operative Department of the Bihar Government.

The scheme for co-operative marketing of sugar in Bihar is financed out of the funds of the Sugar Excise Duty. 215 Canegrowers Co-operative Societies with 4,235 members supplied 16,27,552 maunds of cane to sugar factories in the crushing season 1937-38. 210 new Canegrowers Co-operative Societies were registered in 1938-39. 425 Canegrowers Co-operative Societies with 9,293 members operated in the crushing season 1938-39. The total supply of cane in 1938-39 amounted to 13.40 lakh maunds as against 16.27 lakh maunds supplied in 1937-38. This decrease was due to under-production which led to early closing of most of the sugar factories in the season. About 1000 Canegrowers' Co-operative Societies are expected to operate in the 1939-40 crushing season.

A significant feature of the operation of Canegrowers' Co-operative Societies is the introduction of improved varieties of cane. It is extremely difficult to induce members to plant Coimbatore 299 and Coimbatore 313 cane as these varieties had been lately released by the department of Agriculture and are not yet sufficiently known to canegrowers residing in the interior of the province. A concerted drive, was, therefore necessary and it met with an appreciable amount of success. It will be seen from the fact that the Cane Co-operative Societies in the Darbhanga district alone planted over 70,000 maunds

*For functions of these Advisory committees, vide pages 52 and 64.

of Coimbatore 299 and Coimbatore 313 cane this year. This shows the most important part which Canegrowers' Co-operative Societies can play in introducing greater sucrose yielding varieties of cane in villages in which they are operating to stabilise the sugar industry in the province, provided they receive proper encouragement under the Cane Development Scheme recently sanctioned by the Bihar Government.

A plan of co-ordination between the Cane Development Scheme and the scheme for organisation and operation of Canegrowers' Co-operative Societies is under consideration. Cane Development work is confined exclusively to Canegrowers' Co-operative Societies in the U. P., and it is felt that if a similar policy is adopted in Bihar, it may easily be possible to effect cane development most expeditiously.

The Society also made vigorous efforts to promote mass literacy, and they also contributed service wells and 21 tubewells. They also contributed to a 'Common Good Fund' which was established by a few pioneer societies as a result of the advice of Mr. N. Baksi, the energetic Registrar of the Co-operative Societies. Members contribute one to three pies per maund of cane sold by them to the 'Common Good Fund' of their Societies. If every Society collects Rs. 1,000 it becomes greatly independent of outside help for financing the sugarcane cultivation within a short time. It is impossible for the local government or the sugar factories to finance the sugarcane cultivation of all the Canegrowers residing in their reserved areas. Thus the accumulation of Rs. 1,000 by every society is certain to assure them a long life of useful activities both in the interest of members and in the interest of the industry.

Relations of Cane Co-operative Societies with Factories

Under the Sugar Factories Control Act purchase of cane in a reserved area of a factory is only possible through a cane grower or Canegrowers Co-operative Society. Thus, cane grown in a reserved area cannot be purchased by a purchasing agent for a factory. The factories have thus to purchase the bulk of their cane through co-operative societies. These Societies were started with the object of saving to the grower the money which in the usual course passed to the middleman in the marketing of sugarcane. The experience of the factories, with the Societies has however been not very satisfactory, because the societies have not been able to ensure a regular and stable supply of cane, and some of the societies have started functioning independently of sugar factories and are dominated by persons who are not connected with the actual cultivators. The execution of Cane Development

Schemes has also been entrusted to these Co-operative Societies in the U. P. The fact that the factories have also to pay high rate of commission to the societies for the supply of cane, is also a cause of dissatisfaction with the Societies. We feel that better co-operation should be established between these societies and the factories in the interest of the industry. A little more supervision and control on the part of the Government are called for in order to help the establishment of friendly relations between these societies and factories.

The Societies have also their own grievances against the factories. Particularly, for the work of development of cane which is of vital importance to the industry, fullest co-operation between the societies and the factories is essential. No scheme of development can succeed without the co-operation of the cultivator. In order to ensure the work of development of cane being carried on properly and vigorously, we suggest that some method should be found whereby the help and advice of factories may be utilised in the development of cane, for isolated action on the part of the cultivator will not be of much use. In order that the factories may not have to bear additional cost for purchase of cane, the expenditure to the co-operative societies should be met by grant from the Cane Cess and not from extra commission payable per maund of cane, by the factories. This will also help in smoothening the relations of the Societies with the factories.

During August, 1939, to thanks to the good offices of the U. P. Cane Commissioner, it was possible to arrive at an agreement on most of the points under dispute between the Societies and Factories. It was agreed between the industry and Government that a Central Committee should be appointed in each reserved area composed of two representatives of the mills and two of the growers, in the reserved areas of each factory. The Central Committee may elect its own Chairman and in the case of equality of votes, the decision of the Cane Commissioner, it was suggested, was to be final. This Central Committee while not interfering with the day to day administration of the Co-operative Societies, shall decide on the following matters, and the Co-operative Society in each mill area shall be bound by such decision :—

1. the sowing programme which the society should adopt,
2. the varieties that should and should not be sowed,
3. the fertilisers that should be arranged,
4. the system of survey and supply which should be adopted by it, and

5. the manner of regulation of supply of different cane varieties.

The ultimate responsibility will rest with the Cane Commissioner to see that the Societies adopt the programme and policy decided upon by the Central Committee from time to time and that it administers the same in a reasonable manner.

Sugarcane Research and Development in Bihar during 1938-39

During the year, the Agricultural Department continued its Research work for improvement of sugarcane crop. We give below extracts from a note of the Department of Agriculture, Bihar, indicating the problems to which they devoted their attention during 1938-39. *Varietal Improvement.* 'The varietal position in the Province may be summed up as follows:—Co. 299 has proved outstanding as an opening mill cane. Its comparative freedom from pests and diseases, progressive improvement in juice-character up to the end of March, insignificant field dryage and high ratooning powers are some very desirable features while its low yield and difficult trashing limit to a large extent its rapid spread in the white-sugar belt. Yet with a small premium and chances of early removal from fields, area under this variety is on the increase and in most progressive units may account for some 15 per cent of the total supplies during the next cane crushing season. Co. 313 is the next best variety and is rapidly gaining ground even in areas of Co. 213 on account of its satisfactory agricultural performance and distinctly superior juice quality. The two canes together probably accounted for over 35 per cent of factories supplies in certain factories during the 1938-39 season. Area under Co. 210 is rapidly shrinking. In South Bihar Co. 331 is rapidly replacing Co. 213. Co. 395 which matures in mid-December is about 50 per cent higher tonnage compared to both Co. 299 and Co. 508, and is resistant to top-borer, the worst of the borer pests in the province. Of the newer promising types, mention need be made of Co. 383, B. O. 4 and Co. 513. The latter two are now under extended trial in collaboration with the industry. The existence of the sugarcane Varieties Advisory Committee and the facilities for large scale testing of newer varieties, methods and practices over the entire Bihar environment would appear largely to contribute to rapid success being achieved in this direction.

Studies in the manurial aspect of cane are now beginning to prove definitely that in a light-textured soil environment, the bulky manures and cakes have an added value in so far as they improve the physical and physico-chemical properties of the soil. Such manures will be

largely instrumental in maintaining the fertility level. There are indications that castor cake manuring results in a comparatively higher "Quality Ratio" as compared to Niciphos. Potash has shown no visible visible effect either on the yield or juice quality. In fact, higher doses have resulted in the depression of cane-yield.

Over a number of years the hot weather irrigation of cane has resulted in significant increases in cane yield. Spacing trials at both Pusa and Patna show 3 ft. spacing between rows to be the optimum for both medium early and mid-season varieties at present being grown.

Electro-culture treatments failed to produce any significant effects in the matter of final stand apart from the rapid rate of germinations during the first three weeks.

On the Development side, the chief problems are:

1. Creation of a special whole time Sugarcane Development Section,
2. Intensification of research,
3. Arrangements for the renewal and replacement of sugarcane seed through the establishment of seed nurseries in each mill zone,
4. Adequate manuring of crop,
5. Supply of implements for proper cultivation,
6. Intensification of demonstration and propaganda on the cultivators' holdings
7. Improvements of all communications.

The object in view is to develop fully the reserved area of each factory by increasing the out-put of both the cane and sugar per acre in full collaboration with the industry.

We give below a table showing the extent of the spread of the Coimbatore canes in Bihar during the past ten years.

TABLE NO. 24

Extent of Spread of the Coimbatore Canes in Bihar

Year	Actual Area acres	Area under improved varieties	Percentage under improved varieties
1930-31	2,67,800	1,32,025	49.3
1931-32	2,65,200	1,94,657	73.4
1932-33	2,84,700	2,30,038	80.8
1933-34	4,01,000	3,40,449	84.9
1934-35	4,26,500	3,79,585	89.0
1935-36	4,47,200	4,25,759	96.1
1936-37	4,45,000	4,21,980	97.2
1937-38	3,60,500	3,27,600	97.5
1938-39	3,75,300	3,43,500	97.8

Bigger Allotment from excise duty to Provinces necessary.

The Government of India allot one anna per cwt. out of the revenue derived from the excise duty now levied on sugar to various Provinces, for the development of Sugar Cane. The Imperial Council of Agricultural Research at its meeting held on 1st July, 1935 recommended that the Government should place at the disposal of the Imperial Council of Agricultural Research a sum equal to 2 annas per cwt. of the excisable sugar produced in India for expenditure on approved schemes of research work for improving the quality of sugarcane. The U. P. Sugar Cane Conference held on the 18th June, 1937 also considered this question and decided to approach the Government of India with a suggestion that it should allot annas 3 per cwt. of the excise duty (increased from 28th February, 1937 by over 50 per cent.). We feel that in view of the great necessity of carrying on intensive research work on the various problems connected with the industry, the Government of India should earmark a larger amount for being made over to the Provinces for carrying on research work. We cannot help observing here that the future of the Industry depends on the success it attains principally in the matter of improvement of the quality of cane and of its cost of production.

While discussing the question of the funds for research work, the Tariff Board also recommended that the allotment from the excise fund should be raised from 1 anna to 3 annas per cwt. as they were convinced that the only hope of the Industry ever being able to compete on equal terms with other countries was a reduction in the cost of the raw materials. We hope that the Government of India will give effect to this recommendation of the Tariff Board immediately. If an amount of 3 annas per cwt. is allotted to the Province it will mean a larger allocation among the various sugar cane producing Provinces.

In reply to a question put in the Assembly on the 24th February, 1939 Sir Girija Shankar Bajpai stated that it was anticipated that by the close of the year 1938-39, the Imperial Council of Agricultural Research will have spent Rs. 10,42,000/- on sugar research from 1st April, 1936. During the same period the expenditure on the Imperial Institute of Sugar Technology will be Rs. 7,02,000/-. Payments from the sugar excise fund during this period amounted to Rs. 16,98,432. Important results of the research carried out under the Imperial Council of Agricultural Research scheme at the Imperial Institute of Sugar Technology are included in the Annual reports of

the Council and the pamphlet "a Summary of some practical results of sugar cane research in India."

Sugar Committee's Resolutions Re: Increased Allotment for Research.

We give below for ready reference the text of the Resolutions adopted at the 7th meeting of the Sugar Committee held at Simla in July, 1935, in connection with the question of sugar research.

1. "This Committee is of opinion that progress in sugar research and agricultural development has not been as rapid as it ought to have been. In order to place the Indian sugar industry on a sound basis within the remaining period of protection guaranteed by the Indian Sugar Industry (Protection) Act, more intensive work is required in several directions more especially in those connected with the improvement of the quality of the raw material, the raising of the standard of sugarcane cultivation, the combating of diseases and pests, the dissemination of information concerning improved methods, adequate demonstration and the more rapid multiplication and introduction of new seedling canes of proved value and their supply to cultivators. The continuance and development of the research schemes on sugarcane breeding, sugarcane physiology, sugarcane pathology and sugarcane cultivation at present financed by the Government of India through the Imperial Council of Agricultural Research and research in by-products is as essential as provision of technological research at the Central Sugar Research Institute which has recently been approved. After a consideration of the annual cost of schemes now in progress and future requirements, the Sugar Committee is of opinion that settled and growing sources of income are now needed. It therefore recommends that Government will be pleased to place at the disposal of the Imperial Council of Agricultural Research annually a sum equal to two annas per cwt., on the excisable sugar produced in India for expenditure on approved schemes of the character described above. In the event of this form of subvention not being agreeable to Government, the Committee requests that an annual recurring grant of not less than ten lakhs as recommended by the Tariff Board, be made to the Imperial Council of Agricultural Research for this purpose. The Committee would also invite the attention of Government to the various assurances given by Members of Government from time to time in the course of debates in the Central Legislature."

II. The Sugar Committee recommends that the attention of the Local Governments should be invited to the various difficulties pointed out in the course of this discussion. In the interests of sugarcane

growers in the interior, and of the sugar factories, better facilities for the transport of cane should be provided by Local Governments and local bodies—such facilities as the acquisition of land, construction of culverts, etc.—should be given to factories which are willing to undertake such provision.”

Expenditure on Sugar Research from Central Revenues.

We earnestly hope that the Imperial Council of Agricultural Research will continue to press the Government of India and persuade them to spend liberally on research work for the improvement of cane cultivation and reduction of the cost of production of cane.

Paramount Need for Research Work.

The main problem of the Indian sugar industry has been, and still remains agricultural. Until the average yield of cane per acre is increased to about thrice its present yield of 16 tons per acre, the industry cannot be said to have been placed on a stable footing. The production of improved varieties of cane having higher sucrose content and yielding heavier crops, and their proper cultivation without affecting the fertility of the soil are questions of primary importance. These cannot be tackled unless the Government of India take a keener interest in the matter and make a bigger provision by granting a liberal amount of money every year for a comprehensive scheme of research, agricultural, engineering and chemical. A great deal has yet to be done both on the agricultural and manufacturing side but more on the agricultural side before the sugar industry in India can be put on its feet without the help of protection. The research work financed by the Provincial Governments is at present confined to the chemical, botanical, agricultural and engineering sections and to the experimental farms. Excellent work has been started by the chain of research and other stations subsidiary to Coimbatore which have been established by the Imperial Council of Agricultural Research in the main sugarcane belt of Northern India running from Peshawar to Assam. Mention must be made in this connection of the research work carried on in Anakapalle, Padegaon, Dacea, Shahjahanpur, Muzaffarnagar, Mushari, Assani, Mysore, Pusa and of the technical programmes of work on new and extension schemes, as for example, scheme for research on anatomy and morphology of sugarcane, Sorghum hybrids, scheme for breeding thick canes in Mysore, scheme for research on the utilisation of bagasse for preparation of cardboard and insulated products from bagasse, scheme for investigation on the mosaic and

other diseases of sugarcane, Bombay-Deccan sugarcane research scheme, scheme of research on insect pests of sugarcane in various Provinces, scheme for Research on Genetics of sugarcane, scheme for the manufacture of cattle feed from molasses, etc. These schemes are placed for review periodically before the meetings of the Sugar Committee of the Imperial Council of Agricultural Research. We feel, however, that it would be very helpful if the Government of India would publish from time to time reports on the progress of these various schemes and bring them to the notice of the industry in order to enable them to know and appreciate what is being done in this connection.

Rao Bahadur T. S. Venkataraman, C.I.E., is doing remarkable research work at Coimbatore in connection with the improvement of sugar cane and he has added to the reputation of the Indian plant breeders by his careful researches which have been of great use to the country.

He has been responsible for a complete change in the plantation of cane in the North India which has resulted in an increased output per acre of cane with greater sucrose content than before. His valuable researches, it must be admitted, have added several crores of rupees to the wealth of one Province alone, namely the United Provinces.

The problem of the Industry at present is mainly the problem of effecting improvements in the cultivation of sugarcane. It must be known, understood and realised that India will not be able to sell sugar on equal terms in the world markets until the price of cane is brought down to about 3 annas per maund. In line with the progress made by the Industry in the matter of obtaining higher recovery percentages, strenuous efforts should be made whereby the cultivator can reduce his cost of cultivation to about 2 annas per maund, by intensive cultivation of his land, by careful research work for the growth of cane of heavy yield etc., by proper crop rotation, by irrigation, manuring and use of modern scientific knowledge. Just as manufacturing efficiency is no doubt important, agricultural efficiency and the percentage of sucrose in cane are still more important. The cost of the raw material, viz., cane, and the quality of the cane are the most important elements in the competition and to that end, both the quality of cane and the yield of the tonnage per acre must be improved to a large extent.

Imperial Institute of Sugar Technology, Cawnpore.

The Government of India started the Imperial Institute of Sugar Technology at Cawnpore, for a period of 5 years, from 1st October, 1936. The Sugar Section of the Harcourt Butler Technological Institute was been taken over with the concurrence of the Government of the United Provinces by the Imperial Council of Agricultural Research and has been developed into an Imperial Institute of Sugar Technology. The Institute is undertaking research work on:

- (a) problems of Sugar Technology in general and those of the Sugar Factories in India in particular.
- (b) utilization of the by-products of the Industry,
- (c) detailed testing of the new varieties of cane under factory conditions, and
- (d) general problems of sugar engineering and chemistry.

The Institute provides adequate facilities for the training of students in all branches of sugar technology. The Advisory Board of the Imperial Institute approved the following courses of study in the Institute:

- (1) Associateship of the Institute in Sugar Technology—(12 admissions each year; duration of course 3 years).
- (2) Associateship of the Institute in Sugar Engineering—(12 admissions each year; duration of course 1½ years).
- (3) Fellowship of the Institute in Sugar Technology or Sugar Engineering (3 admissions for each section each year; duration of course 1 year).
- (4) Sugar Boilers' Certificate Course—(12 admissions each year; duration of course 1 year).

The Institute also provides sugar trade information services, bureau of sugar standards, and an employment bureau. The Institute is designed to serve the needs of the Industry in the technical, commercial and statistical matters. It does not however undertake agricultural work on sugar although all important information regarding this is collected and made available to the industry. The Institute gives technical assistance to factories when necessary and has a scale of fees for the various kind of work to be done. It also runs a small experimental factory for the manufacture of sugar by the employment of modern methods and is specially adapted for carrying out investigation of research work.

At a meeting of the Governing Body of the Imperial Council held in Simla on 20th July, 1939, it was resolved that the principle of the establishment of the Indian Sugar Committee on the lines of the Indian Central Cotton Committee was approved and the matter was referred for further examination and a small Sub-Committee consisting of the Hon'ble Dr. K. N. Katju, the Hon'ble Dr. Syed Mahmud, Mr. D. P. Khaitan, Lala Shri Ram, and Mr. P. M. Kharegat. The question of convening an All-India Sugar Conference was also referred for consideration to a Sub-Committee. It was expected that the All-India Sugar Conference would meet in December 1939, but due to the resignation of the Congress Ministers in the chief sugar-producing Provinces, and the out-break of the war, the holding of the conference is postponed *sine die*.

Cost of Cultivation of Cane.

In the year 1933 the Imperial Council of Agricultural Research Instituted an enquiry throughout India to ascertain the cost of cultivation of sugar cane and cotton crops of India. The results of their enquiry have been published in several volumes dealing with Bombay, Bihar, Madras, U. P., Sind, C. P. Bengal etc. The Tariff Board also examined the cost of cultivation in the principal sugar producing areas. They have come to the conclusion that 0-3-7 per maund is a fair estimate of the cost of cultivation in the U. P., 0-3-4 in Bihar, 0-5-0 per maund in the Punjab, 3-7-0 in Bengal, 0-5-10 in Bombay and 0-5-5 in Madras. The Tariff Board also observes that allowing for the same climatic advantages, the possibilities of a general improvement in tonnage and quality are greater in the South than in the North, and an equalisation of the cost of production is, according to expert opinion feasible at no distant date (*vide* page 36 Tariff Board Report). For the purpose of estimating an All-India figure however the Tariff Board observed that greater weight must be given to the cost of cultivation in the United Provinces and Bihar, the main sugar producing areas. Taking all points into account, the Tariff Board considered that 0-3-9 may be taken as a reasonable estimate for the cost of cultivation for the whole of India. The Tariff Board further considered as to what would be reckoned a reasonable margin of profit to give the cultivator and arrived at the conclusion that six pices per maund on an estimated cost of -/3/9 was in their opinion a fair figure. Adding the two, 0-4-3 per maund of sugar cane was the estimate of the Tariff Board of the fair price.

Sugar Committee Meetings.

The Sugar Committee of the Imperial Council of Agricultural Research met at New Delhi on the 7th of March, 1938 and discussed various questions of importance to the sugar industry. The previous meeting was held on the 3rd and 4th May, 1937 at Simla.

The 11th Meeting of the Sugar Committee was held at Simla in May, 1939, when 18 Progress Reports of the schemes financed by the Imperial Council of the Agricultural Research. Six new projects, two extension schemes, two Technical programmes etc. were considered. The Committee also discussed the measures required for obtaining an estimate of the average yield of sugarcane per acre and the average *Gur* cane ratio in important sugar cane growing tracts.

The problem of utilisation of molasses and press-mud as manure for sugarcane was also discussed.

Marketing Survey of Sugar.

The question of the marketing survey of sugar and sugarcane was discussed at the meeting of the Sugar Committee of the Imperial Council of Agricultural Research on the 3rd May, 1937 at Simla and such a survey was undertaken under the guidance of the Agricultural Marketing Adviser to the Government of India, with a view to assist in placing the sugar industry on a sound footing. The survey is estimated to cost about Rs. 50,000. We give below extracts from an official note on the position of the marketing survey of sugar up to the year 1939.

Note on the Position of the Marketing Survey of Sugar in 1939.

The Marketing Survey of Sugar was started in all provinces and major states in December, 1937 under the guidance of the Agricultural Marketing Adviser to the Government of India. It was designed to cover the various raw and refined sugars made from sugarcane, palm or any other source together with their numerous products. A large mass of valuable information on the different aspects of this industry has since been collected from all parts of the country and is now under compilation. Since a number of states and minor administrations do not possess wholetime marketing staff, arrangements were made to obtain the necessary data by means of a simple questionnaire. Special attention has been given to problems such as the utilisation of the cane crop for different purposes, the quantitative and qualitative demand for the various sugar products, seasonal price fluctuations and price

differences caused by variations in quality, merchandising practices and costs in respect of which reliable information has hitherto been unavailable.

In order to be able to frame reliable estimates as to how much of the cane crop is used in the manufacture of Gur (jaggery) and Khandsari sugar, for chewing, as seed and for other purposes, a detailed investigation was conducted through the district staff of the local agricultural departments on the basis of a questionnaire specially prepared for the purpose. Replies to this questionnaire have now been received from most areas and the information collected by the agricultural officers has been further supplemented by personal investigations undertaken by the central and local marketing staffs. As a result of this enquiry it is hoped that much useful information will be brought to light relating to the production and consumption of the various sugar products particularly in rural areas.

With a view to make a special study of the conditions prevailing in the important producing and consuming centres extensive tours converging more than 200 markets were undertaken by the central marketing officers. The information collected has revealed a wide field for development particularly in regard to the adjustment of supplies to meet specific qualitative requirements, the regulation of prices and reduction in the costs of primary marketing.

Considerable maladjustment between production and demand was observed in the eastern districts of the United Provinces where Gur is not generally made after clarifying the cane juice. Consequently the product bears a dirty appearance and is in little demand for eating purposes in other areas. A large proportion of this Gur is therefore utilised as the raw material from which white sugar is made both by the indigenous process (khandsari) and vacuum pan refineries. This type of Gur generally sells at a discount of -/6/- to Rs. 1/8 per maund as compared with good eating Gur and in years when the demand from the refineries is less the margin becomes much wider. For example, during the season 1938-39 the high level of Gur prices made refining an unprofitable undertaking. Owing therefore to the reduced demand for this type of Gur the price differences between the eating and refining quantities widened to as much as Rs. 2/- to Rs. 2/8/- per maund. It is essential that the cultivators in those districts should be instructed to manufacture their products in such a form as will yield the highest money returns under prevailing conditions. At an informal

discussion which was held in Delhi in November, 1938, the Director of Industries U. P. was accordingly advised to concentrate the activities of his staff under the Gur Development Scheme, mainly in the eastern districts of the province where in addition to the handicaps imposed by the productions of inferior quality, the distributive machinery also leaves much to be desired. The establishment of a central co-operative organisation was also suggested as a means of improving the marketing facilities in those districts.

A scheme was prepared and communicated to the Registrar, Co-operative Societies, United Provinces regarding the organisation of co-operative societies for the marketing of cane juice to Khandsaris in the Rohikhand Division of the United Provinces. In this area under existing conditions the producer receives only about two-thirds of the price paid by the Khandsari for his juice. It is understood that steps are being taken to put this scheme into operation.

A study of Gur prices over a series of years in centres of production and consumption has revealed wide differences between season and off season values. This has been particularly noticeable in the last 2 years when the variation amounted to over 100 per cent. As Gur prices depend very largely on internal market conditions, such wide fluctuations are hardly justifiable and seem to be caused primarily by the lack of reliable market intelligence and to some extent by the absence of proper storage facilities. These and allied problems bearing on prices such as those relating to the operations of futures trading associations or exchanges handling Gur sugar are being studied in all their aspects. Another activity of the marketing organisation has been to examine the possibilities of increasing consumption and extending the markets for various sugar products. There can be little doubt that the proper organisation of distribution on an economical basis must help in stimulating consumption and adding new markets.

In order to examine the possibilities of fixing grade standards for various sugar products, over 1000 samples of gur, rab, khand etc., were collected from all parts of the country and analysed at the Imperial Institute of Sugar Technology. On the basis of these results and having regard to the quality characteristics recognised by the trade, grade, specifications for gur and other important commercial sugar products are in course of preparation. The standardisation of grades under the provisions of the Agricultural produce (Grading and Marking) Act, 1937 is calculated to facilitate distribution consider-

ably. The possibility of applying the 'Agmark' to special factory sugars e.g. for coffee or for use in the preparation of syrups is also under consideration.†

Detailed survey reports of the provinces and states are rapidly nearing completion and such information as has been submitted coupled with the results of the investigations referred to earlier in this note have enabled the central marketing staff to make appreciable progress in preparing the basic data for the all-India report which it is hoped to issue in two parts, the first dealing with gur and unrefined sugars and the second with factory sugar and products.

These Reports are expected to be published by 1941.

Proportion of Gate-cane to Rail-cane Crushed in Factories in India.

It would be of interest to see the statistics of the quantity of cane crushed by the factories in U. P., Bihar and other parts of India, brought to the factories by rail and by carts. The former is known as rail-cane and the latter as gate-cane. We give below the percentages of gate-cane to the total quantity crushed by factories in the various provinces for the last five years. These estimates are based on information furnished by a fairly large number factories. The balance is cane brought by rail known as rail-cane.

TABLE NO. 25

*Estimated Percentage of Gate-cane to the Total Quantity of Cane Crushed by Factories in the Various Provinces.**

Province	1934-35	1935-36	1936-37	1937-38	1938-39
	%	%	%	%	%
North Bihar	51	51	61	56	57
South Bihar	34	43	37	34	36
Total Bihar	48	50	58	53	53
United Provinces	65	66	68	72	66
Bengal	22	26	45	55	54
Punjab	—	51	61	69	57
Bombay	100	100	100	100	100
Madras	—	35	67	71	72

*Compiled by the Indian Sugar Syndicate Ltd. in September 1939.

†At a meeting of the Indian Sugar Syndicate in 1939, an agreement was expressed with the proposal of the Agricultural Marketing Organisation that factories which manufacture special sugar might consider the possibility of applying the Agmark. It was felt that the universal application of Agmark to sugar was at this stage unnecessary.

A glance at the above table will show that there is a definitely increasing tendency for factories acquiring a larger percentage of gate-cane, which being fresh is richer in sucrose and more favourable to the mills for crushing. In Bombay all cane is gate-cane and in Madras the proportion has been increasing very rapidly. With the demarcation of the zones in future a still larger percentage of cane will be gate-cane for which, incidentally, the price is fixed 0-0-3 and 0-0-6 per maund higher than rail-cane depending upon the distances with effect from the 1938-39 crushing in U. P. and Bihar. The Governments of Bihar and United Provinces have maintained the same difference in price of rail cane and gate-cane, in 1939-40 also.

Factories Prefer Gate-cane.

Generally, cane is transported to factories by carts within a radius of about 15 miles from the factories. Factories prefer gate-cane to rail-cane for various reasons including its freshness, uniformity of supply, less dependence on wagons which sometimes arrive late, and less handling. We have no doubt that with improvements of roads and communications, larger and larger quantities of cane will be brought by carts and delivered to factories as gate-cane. Where gate-cane is not available the factories have to obtain their requirements of cane from long distances by rail. The average distance of cane brought by rail may be taken as 15 miles and the maximum at about 200 miles.

Minimum Railway Freight on Cane should be Reduced.

Under the present minimum freight charged by the Railways viz. .10 pie per maund per mile, it is not possible for factories to bring cane from greater distances owing to the heavy cost involved. In view, however, of the apprehended short crop in the 1939-40 season, we trust that the industry will approach the Railway Board in good time and get the minimum railway freight reduced, in order to enable the various Railways to quote specially low freight rates from long distances to the factories with a view to make it economical for the factories to crush cane brought from long distances, to help the cultivators whose fields lie at long distances from the factory, and to augment their own revenues. Individual Railways, however, cannot quote lower rates than the prescribed minimum, unless they are absolved from this obligation by the Railway Board. Permission should therefore be obtained from the Railway Board, as was done in the season

1934-35 when the earthquake occurred in Bihar for otherwise it will not be possible to get cane from such long distances, and the factories will not be able to crush the maximum quantity of cane.

Sugar Cane Research in U. P.

We give below extracts from a report of the sugar cane research work conducted by the Economic Botanist to the Government of U. P. at Shahjahanpur, Muzaffarnagar, Gorakhpur and Kalai (Bareilly) for the year 1938-39.

During the year seedling studies were conducted at Shahjahanpur. It was found that Co. 527 an early variety with satisfactory tonnage has not only given a very promising performance in the yield trials but has also given most economic returns in the tests for rab and sugar.

In a test under farm and cultivators condition Co. 213, Co. 285, Co. 210 and Co. 331 gave the best results.

Varietal and agronomic experiments conducted at Muzaffarnagar showed that Co. 312 was the mid season ripening cane, Co. 421 having suffered both in tonnage and sucrose, presumably due to weather conditions.

Experiments have been started at Aligarh with a view to understand more fully the economics and ratooning with special reference to their relationships with incidents of pest and disease.

Sugar Cane Research in Bihar—a five-year Plan

We have already referred before to the Inter-Provincial Research Scheme for the United Provinces and Bihar which was recommended by the Sub-Committee of the U. P. Sugar Control Board held in June 1939. The Director of Agriculture, Bihar, prepared a five-year plan of sugar cane development providing for the creation of a special staff and suggesting a joint Board of control for collaborating between a Research Institute at Shahjahanpur in the U. P. and at Pusa in Bihar. The details of the scheme have been published by the Director of Agriculture, Bihar, in September, 1939 in a brochure entitled "proposals for the organisation of a scheme for research work on sugar cane and development of cane areas in Bihar." It states that there is a great necessity for setting up a research organisation with the fullest staff and equipment in view of the vastness of the problems awaiting solution in almost all aspects of the sugar industry.

The scheme provides for the creation of one cane development officer (as in U. P.), one Assistant *Gur* Chemist, one Agronomist, one Soil Bio-chemist, one statistician and other sub-ordinate staff. But in the first instance, expenditure will be incurred and appointments made only till 31st March, 1942.

The chief problems to be tackled have been mentioned on page 218.

The Government of Bihar have sanctioned the appointment of a whole time Cane Development Officer and other staff required for the Special Sugar Cane Development Section. In the course of a memorandum on the subject, the Secretary to the Government of Bihar in the development and Employment Department also observed that other technical staff required for the purpose will be recruited immediately. It is also proposed to start at least 33 nurseries before March, 1940. The Government also propose to spend some money for decreasing the price of seed in order to induce the growers to renew the seed of established varieties. A reduction of one pie per maund of seed cane distributed to the growers appears to be a suitable inducement. The Government of Bihar will spend about Rs. 39,000 on this work in 1940-41 and Rs. 1,28,700 per year in the subsequent years and this has been sanctioned. By adapting the scheme, the Department of Agriculture would be in a position to supply from 1941-42 onwards sufficient seed for renewal or replacement on 5000 acres of land.

Manuring of Crop.

As the renewal or replacement of seed alone will not bring a good yield unless the crop is adequately manured Government propose to supply a mixture of oil cakes and super phosphates for the major portion of North Bihar, supplemented by a small dose of Nitrogen for South Bihar, at a reduced rate of 20 per cent. cash rebate on the value of the manure to cultivator. The Government will also demonstrate the use of improved labour saving implements amongst the cultivators in the villages, and will provide the necessary overseers and Kamdars for administrative work. The scheme of the Bihar Government is calculated to cost Rs. 53,000 in 1938-39 rising to Rs. 6,64,000/- during 1942-43. In this provision has also been made for existing expenditure amounting to about Rs. 4,38,000/- which is at present being financed by the Sugar Excise grant of the Government of India.

Better Facilities for Cane Transport.

The need of improvement of roads in the vicinity of factories with a view to enable cane to reach the factories in a fresh condition and thus to prevent dryage and the consequent loss of sucrose content cannot be over-emphasised. We also feel that the Government should render suitable assistance in the matter of development of feeder and other roads in the rural areas and thus help the movement of all agricultural commodities. The bad state of roads is responsible for increasing the cost of transportation, and at the same time it also restricts the area from which cane can be supplied to the factories. In some parts of U. P. and Bihar, efforts are being made to increase the carrying capacity of carts by providing pneumatic-tyred wheels for the bullock drawn carts in order to simplify transport on un-metalled roads.

We are glad to find that the Governments of U. P. and Bihar are also giving their attention to this matter.

*Aerial Ropeway for transport of Cane at Dalmianagar.**Tramways also used for transport of Cane*

We have already observed before, that the cost of cane transport by railways is considerably higher and factories prefer to get as much quantity of cane at the gate as possible. In some areas tramways are also being used advantageously, as the cost of cane transport by the tramways is considerably lower than that of cane transported in bullock-carts. About 15 factories in U. P. Bihar and Bombay ran private tramways for transport of cane. Cane is transported by the water-route by a very few factories. An aerial ropeway has been erected by the Rohtas Industries Limited for their Sugar Factory at Dalmianagar, for taking cane received by the canal. It transports 70 tons of sugarcane per hour. The overall length of the ropeway is 666 yards and is 18 feet above the ground. The advantage of transportation of cane over a ropeway lies in its quickness and cheapness.

Necessity of removal of Tolls.

Vexatious restrictions of tolls levied on cane carts engaged the attention of the Industry and the matter was brought up for consideration at a meeting of the Sugar Control Board held at Lucknow on the 14th October, 1939. The Board decided to request the Government to take steps to induce Municipal Boards, Town and Notified Area Committees to exempt sugar cane carts passing through their

respective limits on their way to Factories from payment of dues such as octroi and terminal taxes and suggested that if it was not for any reason possible to eliminate these taxes, the charge for same should be substantially reduced.

Problem of Utilisation of Molasses.

Having referred to the problem of the raw material, we may now turn our attention to the problem of by-products of the industry and their utilisation. Molasses and Bagasse are the two principal products of the industry and the seriousness of the problem now before the industry can be imagined from the fact that whereas seven years ago, when the Tariff Board reported, the price of molasses was Rs. 1/8/3 per maund, it has now come down to Rs. 0-1-6 per maund, and indeed its disposal has become a source of great difficulty for the factories. If molasses is thrown away by factories, for want of a market, it threatens to be a menace to the public health in the surrounding districts on account of its disagreeable smell and pollution of water if it is allowed to run into an adjacent water course. Molasses as a substance has value, but uses must be found for which it can be used e.g. manuring, cattle-feed, road making, utilisation for the manufacture of Power Alcohol, for the reclamation of *Usar* land, etc. The following table shows the production of molasses in India for the last 8 years:—

TABLE NO. 26

*Total Production, Import, and Export of Molasses in India†
for the last 8 years.*

Year	Production of Molasses in India in Thousand Tons				Import of Molasses into British India (Tons) Apl.-Mar.	Export of Molasses from British India (including Palmyra and cane jaggery) (Tons) Apl.-Mar.
	From Cane factory	From Gur Refine- ries	From Khand- sari.*	Total*		
Nov.-Oct.						
1931-32	69	46	250	365	40,191	740
1932-33	130	56	275	461	31,991	819
1933-34	190	40	209	430	2,401	1,201
1934-35	234	22	150	406	415	1,153
1935-36	337	33	125	495	Nil	1,026
1936-37	406	10	100	516	Nil	24,195
1937-38	349	8	125	482	5	79,167
1938-39	242	7	100	349	2,160	52,676

†After 1936-37, statistics Re: Burma are excluded.

*Official Estimates.

The import of molasses has now practically stopped. There has been small export since 1936-37. The price of molasses has fallen from 0-2-5 from 1930-31 to 0-15-0 in 1931-32, 0-4-0 in 1932-33, 0-5-0 in 1933-34, 0-2-6 in 1934-35, 0-4-0 in 1935-36, 0-1-7 in 1936-37, 0-1-6 in 1937-38 and to about 0-2-0 in 1938-39.

In this connection, the Tariff Board of 1937 has also observed on page 104 of its report that if the large quantity of molasses which brings no return to the factories, but involves expenditure in their disposal, is taken into account, the average value for the whole of India would probably be not more than 8 pies per maund.

U. P. and Bihar Joint Molasses Committee.

The Governments of U. P. and Bihar appointed an expert Committee to devise ways and means for starting the manufacture of Power Alcohol from molasses and to report on the best method of mixing Power Alcohol with petrol and also to explore the possible uses of molasses and their practical application.

The Committee submitted its report to the Government of U. P. and Bihar in June, 1938. The report was published in July, 1939. The findings of the Joint Committee on various important questions appertaining to the enquiry re-Power Alcohol and their recommendations are given below :—

U. P. and Bihar Committee's Findings.

The Committee has dealt with the subject of power alcohol, tracing its growth in the various countries of the world, and also with reference to the importance it has now assumed so far as India is concerned. It has endeavoured to deal with the properties of power alcohol and has, with the materials available, forecasted what the cost of manufacture would be. The Committee has also suggested that it would be possible for power alcohol being produced at a price, which would enable it to bear, if necessary, an excise duty equal in amount to that on petrol without imposing any additional burden either on the tax-payer or the motor-owner.

It would be seen that if the entire surplus quantity of molasses, estimated at 265,000 tons, be converted into power alcohol, about 15 million gallons of it can be produced, calculating one ton of molasses as equivalent to 57 gallons of power alcohol. The total consumption

of petrol being as high as 100,000,000 gallons, the above-mentioned quantity of power alcohol can be easily utilised, particularly as there would be little difficulty in the disposal of power alcohol in the interior parts of the country, where it can be sold at the same price as petrol. Thus the replacement of 15 million gallons of imported petrol by indigenous power alcohol would mean a saving of about Rs. 40 lakhs per year to the country.

The Committee would like to observe here that the case for the development of the power alcohol industry within the country has assumed particular importance with the separation of Burma from India. It appears to be in national interests to encourage the manufacture of power alcohol, and thus get rid, to such extent as is possible, of the dependence of the country on imported petrol, the regular supply of which cannot be assured during an outbreak of hostilities, when it would be in greatest demand.

Power alcohol is an ideal fuel having great flexibility, which makes it possible to be used in higher proportions for heavy types of vehicles. If, therefore, for some reasons, there is a serious shortage of petrol in the country, or if imports are obstructed, or if the price of petroleum which is dependent to some extent on political considerations is enhanced to an uneconomic level, the country would have an alternative supply of fuel, namely power alcohol, to fall back upon.

The Committee estimates that the quantity of petrol consumed in the United Provinces and Bihar will soon reach a figure of 10 million gallons* so that the requirements of power alcohol for the two provinces will be in the neighbourhood of 25 million gallons, for the manufacture of which about 44,000 tons of molasses will be required. But there is no doubt that if a start is made, it will be possible to supply power alcohol to the neighbouring areas as well, and the quantity of molasses so utilized will increase gradually. Although, therefore, the relief given to the molasses situation in the initial stages would not be very substantial there is the certainty that once the industry is established, it will be possible to extend considerably the use of "industrial alcohol" and methylated spirit." The Committee is thus convinced that the power alcohol industry satisfies all the necessary conditions required for the establishment of a new industry, namely a cheap and abundant supply of raw material in the form

*In 1937, the off-take of petrol was estimated at 5½ million gallons in the United Provinces and 2¼ million gallons in Bihar.

of molasses, an adequate supply of labour, and an extensive home market—present as well as potential.

Findings of the Joint Committee

The findings of the Committee on various important questions appertaining to the inquiry regarding power alcohol are given below to facilitate reference:

- (a) The quantity of surplus molasses per annum is estimated at about 265,000 tons for the whole of India.
- (b) The scheme for the export of molasses from India has virtually been a failure.

The average price received by the sugar factories for molasses in this scheme was 1 anna 2 pies per maund during 1936-37.

- (c) (i) The use of power alcohol-petrol fuels mixed in proper proportions in place of straight petrol is not likely to give rise to any trouble and would not ordinarily require any change to be made in the adjustment of the engine or carburettor.
- (ii) The use of a 50: 50 power alcohol-heavy petrol mixture in motor lorries and buses may be found to give more satisfaction in tropical countries like India than in Europe.
- (iii) Straight alcohol, even of the usual rectified spirit strength, can be used without much trouble in specially designed stationary engines or for running tractors and other agricultural machinery.
- (d) There are two recognised processes for the manufacture of power alcohol, namely, the Azeotropic and the Salt-dehydration process. Judging from the number of installations all over the world, both the processes seem to be quite satisfactory.
- e) The conditions in the United Provinces and Bihar are very favourable for the manufacture and use of power alcohol made from molasses.

- (f) The power alcohol industry can be established without a subsidy from the Government. But, even if it were slightly more costly, the industry should be encouraged, as it would lead to the development of other industries.
- (g) Power alcohol can be marketed in the United Provinces and Bihar, as also in the other adjoining inland areas at substantially the same, if not lower, price at which petrol is now being sold.
- (h) The average price of petrol, ex-pump calculated for most of the large towns in the United Provinces during the greater part of 1937 was Re. 1-9-0 per gallon.
- (i) Power alcohol can be manufactured at such a cost that an excise duty almost equal to that on indigenous petrol can be levied on it.
- (j) The manufacture of power alcohol seems to be a subject under the control of the Provincial Governments.
- (k) (i) The cost of manufacture, by the Azeotropic or the Salt-dehydration process, of power alcohol, starting from rectified spirit and excluding the cost of denaturation, would be about As. 0-6-6 per gallon, when the cost of molasses is As. 0-6-0 per maund delivered at distillery. By adopting a modified process, it may be possible to bring down the cost to about As. 0-6-0 per gallon. Again in case molasses are available at As. 0-4-0 per maund, these prices would further go down by about As. 0-1-0 per gallon respectively.
- (ii) The price at which power alcohol may be delivered at the petrol mixing depots in these two provinces may not be higher than Re. 1-4-0 per gallon, after paying As. 0-6-0 per maund for molasses, As. 0-1-0 for denaturants, and As. 0-10-0 as excise duty.
- (l) The average cost of imported petrol at the railside petrol depot in the United Provinces works out about Re. 1-5-0 per gallon.

Recommendations of the Joint Committee

The Committee, therefore, make the following recommendations:

- (a) The power alcohol industry should be established under the control of the Provincial Government.

- (b) A Power Alcohol Advisory Board should be established.
- (c) The duties and functions of the Board would be to advise the Government generally on all matters connected with the industry.
- (d) Necessary legislation should be enacted at an early date for the compulsory mixture of power alcohol with petrol.
- (e) Petrol should not be allowed to be retailed until it has been mixed with power alcohol.
- (f) The present petrol distributing organisations in these two provinces should be required to take up the distribution of the fuel. Failing satisfactory arrangements being made with them, the Government should make alternative arrangement for the same.
- (g) Power alcohol should be made available at all petrol depots at a uniform price contracted with the Governments, inclusive of any excise duty.
- (h) Petrol used for admixture with power alcohol should conform to specifications laid down by the Government.
- (i) The denaturants for power alcohol may be one of the following:
 - (1) "Coal tar Benzole"—3 parts by volume or
 - (2) Wood-spirit—2.5 parts by volume, per 100 volumes of power alcohol.
- (j) The Government should explore the possibilities of promoting the use of alcohol-mixed fuels for power purposes in agricultural operations, especially in sugarcane areas.

Industrial Alcohol.

The findings of the Committee on various important questions with regard to the uses of industrial alcohol and also of molasses for other industrial and agricultural purposes are given below:

- (1) There is a large field in India for expansion in the use of alcohol for industrial purposes.

(2) The use of "methylated spirit" for purposes of heating and lighting may be considerably increased by suitable propaganda especially when there is the possibility of marketing it at a price competitive with kerosene.

(3) The "Vend-fee" of As. 0-8-0 per gallon levied on methylated spirit is very high as compared with the excise duty on kerosene.

(4) The high rate of "Vend-fee" on methylated spirit is a great handicap against its more general use.

(5) The present market in India for vinegar, acetic acid, commercial organic solvents, and such other products wherein alcohol is used as a raw material, is small, but is capable of being developed.

(6) The use of molasses as a fuel is unremunerative.

(7) The use of molasses for making road compositions is still in the early stage of experimentation.

(8) Investigations regarding the utilization of molasses for making composite cattle-feed have so far not given any discouraging result.

(9) Yeast for cattle-feed can be manufactured from molasses at the same time as alcohol, and the economic possibilities in this direction seem to be attractive.

(10) The use of molasses as manure in normal soils has not received much support from the majority of agricultural experts in India.

(11) The use of molasses for reclaiming *usar* soils has aroused considerable interest and is being tried in different parts of India. At many places encouraging results have been obtained and extended trials are being given to this process of reclamation.

Recommendations.

(1) "Industrial Alcohol" for use in internal combustion engines should be (i) more heavily denatured than power alcohol; (ii) free from any kind of excise duty; and (iii) sold at almost the cost price.

(2) Research work should be undertaken by the Government on all technical matters connected with the use of industrial alcohol for power generation in stationary engines, tractors and lorries.

(3) Intensive propaganda work should be done to popularise the use of methylated spirit for household purposes, such as for heating and lighting.

(4) Facilities should be given by the Excise Department to encourage experimental investigations for the commercial use of industrial alcohol for solvent and other purposes.

(5) Investigation should be made into the commercial and practical possibilities of combining the manufacture of alcohol with that of yeast for cattle feeding.

(6) The results of the experiments now being carried out under the Imperial Council of Agricultural Research on (i) the feeding of cattle with bagasse-oilcake-molasses cakes, and (ii) road-making and surfacing compositions, should be closely watched by the Government, as these uses may form in future substantial outlets for molasses.

(7) The Agricultural Departments of the two provinces should give an exhaustive trial to the method of reclaiming *usar* soils by the application of molasses, and study carefully the economic aspects.

Concluding Remarks.

The terms of reference to the Committee are as follows:

(1) To advise on the manufacture of power alcohol out of molasses;

(2) To report on the best method of manufacture;

(3) To report on the best method of manufacturing petrol-alcohol mixture; and

(4) To explore the possibilities of the use of molasses in the other practical applications.

Under the first heading, the Committee has stated that the manufacture of power-alcohol out of molasses is a feasible proposition, being an economic one, and that power-alcohol could be manufactured and sold in the United Provinces and Bihar, and in the other interior places, at a price which could be less than the present selling price of petrol, and which could bear, if necessary, the same excise duty as the Government of India may levy on petrol.

The Committee feels that the best method of developing this industry, which is an important one, would be by introducing legislation

in the United Provinces and Bihar, and in such other provinces as would like to do so, making it compulsory for all petrol sold in these provinces, to be mixed with power-alcohol in a definite proportion, say, 20 per cent. by volume of power-alcohol.

The petrol-alcohol mixture should be prepared under Government supervision, which could be effectively done by the entire production and distribution being regulated by an Advisory Body referred to elsewhere.

As regards the best method of manufacture, there are two well-known processes—Azeotropic and Salt-dehydration—both of which can be tried in India.

The mixture of petrol and alcohol does not appear to present any serious difficulties. The best and the practical method of effecting this appears to be, for alcohol to be transported in bond from the various places of production, to places where there are bulk installation by the distributing agencies for effecting alcohol-petrol mixture, the actual mixing being done in a suitable manner, as may be decided upon to safeguard the interests of the Excise Department.

The Committee is of opinion that the other uses which molasses could be put to, e.g., for the surfacing of roads, for feeding cattle, and for reclaiming *usar* soils, are still in the experimental stage, and the various problems connected with them have not been sufficiently worked out.

The Committee, therefore, feels that from the economic point of view, the most profitable outlet for molasses—an important by-product of the Sugar Industry now running almost to waste—is in the manufacture of alcohol required for power generation and for other industrial purposes. It is also convinced that several other industries such as the manufacture of commercial organic solvents, acetic acid, chemicals requiring alcohol as one of the raw materials or ingredients in their manufacture will develop in the country with the establishment of the power alcohol industry.

There can be no doubt that in modern times the production of motor fuel is a matter of vital importance to every country, and it would be desirable if India developed her resources for the production of a motor fuel which can be pressed into service, if and when necessary, for purposes of speeding up the mechanization of the army, and the development of air-craft. The early establishment of the power

alcohol industry on a sound basis will enable India to become an object of strength not only to herself but also to the Empire.

Bihar and U. P. Government* Resolutions on Utilisation of Molasses

A Joint Plan for the Two Provinces.

The Government of U. P. published a Resolution in the U. P. Gazette, dated the 8th July, 1939. The Bihar Government also published an identical Resolution in the Bihar Gazette. For ready reference, we are giving the full text of this Resolution.

"The problem of the utilisation of molasses, especially for the manufacture of power alcohol, has been engaging the attention of both the Governments and public for some years. The Governments of Bihar and the United Provinces accordingly appointed a committee in January, 1938, to go into the whole question and report as to the best way of dealing with the problem. The Committee consisted of:

(1) Dr. N. R. Dhar, D. Sc., F.I.C., I.E.S., Professor, Allahabad University.

(2) Mr. G. H. Dickson, Messrs. Begg Sutherland and Co., Cawnpore.

(3) Mr. Ananthasubramanyan, Mysore Sugar Co., Ltd., Bangalore.

(4) Mr. P. S. Maker, Chief Chemist, Majhaulia Sugar Factory, District Champaran.

(5) Lala Padampat Singhania, Cawnpore.

(6) Mr. M. P. Gandhi, Chief Commercial Manager. The Rohtas Industries Ltd.

(7) Dr. S. S. Bhatnagar, O.B.E., D.Sc., F.Inst.P., Professor of Punjab University.

(8) Dr. N. C. Chatterji, D.Sc., Harcourt Butler Technology Institute, Cawnpore.

"The report of the committee was received in the middle of June, 1938 and has been further examined by both Governments. The most important points that have to be considered in this connection are

*Vide U. P. Government Gazette dated, July 8th, 1939.

whether the manufacture of power alcohol is a sound economic proposition and what arrangements are to be made for the disposal of the power alcohol when manufactured.

Molasses worth 13.5 lakhs Lost Annually

"The total quantity of molasses produced in vacuum pan sugar factories in the United Provinces and Bihar has been estimated at 300,000 tons a year of which, it appears, nearly 200,000 tons are mixed with factory effluent and discharged into neighbouring fields and water-courses as waste, thereby polluting the local sources of water supply, giving rise to offensive odors and causing numerous complaints from the local inhabitants. Some 3 years ago an exporting company undertook to purchase molasses at As. 0-4-0 per maund, but it appears that in 1936-37 they purchased some 80,000 tons at an average price of just over As. 0-1-0 a maund, while the quantity purchased since is much less. The value of the molasses lost at As. 0-4-0 a maund comes to 13½ lakhs of rupees annually.

"If power-alcohol were to be manufactured from molasses, it is estimated that the output would be 2.2 gallons of alcohol from one maund of molasses or 60 gallons from one ton. Hence Bihar and the United Provinces could between them produce 120 lakhs of gallons of power alcohol a year. The committee have, however, recommended that for the present only as much power-alcohol should be manufactured as can be absorbed in Bihar and the United Provinces and the Governments of both provinces are disposed to accept this view. They also agree that the minimum economic unit for manufacture should be taken to be a plant of a capacity of 2,200 gallons a day, which, it is estimated, will cost about 2½ lakhs of rupees. A number of such plants may be put up at convenient places, the plant being duplicated where a central distillery is found to be more convenient for the purpose of distribution of power alcohol in the case of Bihar.

Cost of Manufacture.

"The cost of manufacture, if a plant of this size is installed, has been estimated by the committee at from 3 to 3½ annas per gallon of alcohol produced, excluding the cost of molasses. Since the report of the committee was written, it has come to light that no recurring royalty will have to be paid for the use of the patent process to be adopted. Hence the cost of manufacture may be taken to be As. 0-3-0. It has been suggested that this cost can be reduced by having one large scale plant instead of a number of smaller ones, but this need not be

considered for the present. Even allowing for the price of molasses at As. 0-4-0 a maund, and another As. 0-1-6 the cost of transport thereof, the cost of the molasses in one gallon of power alcohol comes to 0-2-6 and the cost of production of one gallon of alcohol to 0-5-6.

"In order to arrive at the actual selling price, it is necessary to add to this figure the amount of the excise duty, if any, and the actual distribution and selling costs. The latter should not exceed $3\frac{1}{2}$ annas a gallon and even if the excise duty is calculated at the same rate as the customs duty on petrol, the total cost comes to Re. 1-3-0 a gallon, which is appreciably lower than the price of petrol in Bihar and the United Provinces. It thus appears that it is an economic proposition to manufacture power alcohol, provided it can be used in these provinces.

Contemplated Legislation.

"Practically the only use for power alcohol is as a motor fuel, mixed with petrol. The Governments of Bihar and the United Provinces are satisfied that the admixture of 20 per cent. of power alcohol with petrol is unobjectionable from the point of view of the motor industry and are prepared to undertake legislation to make such admixture compulsory in the United Provinces and Bihar unless other suitable arrangements can be made for the same. As the total quantity of petrol consumed in those provinces is in the neighbourhood of 90 lakhs of gallons a year, it is possible to replace some 18 lakhs of gallons of petrol by power alcohol. In other words, some 30,000 tons of molasses can be utilised in this way.

"The Provincial Governments realise that this will not altogether solve the problem of surplus molasses. But a useful beginning can be made and it may be possible later to arrange to supply power alcohol to other provinces also at a price which is not appreciably higher than that of petrol, excluding the surcharge. For the present however, the two Governments intend to proceed with the making of suitable arrangements for the manufacture and sale of power alcohol in these provinces.

"In conclusion, the Governments of Bihar and the United Provinces desire to thank the members of the committee for their arduous work and their valuable report which will serve as a useful guide for the development of the power alcohol industry."

During the month of October, 1939 the U. P. Government implemented the chief recommendation of the Committee and passed a U. P. Power Alcohol Act* in both houses of the U. P. Legislatures. The Government of Bihar are expected to pass a similar Act beforelong.

We earnestly hope that the Government of India will now give full facilities which may be required in connection with the fruition of this scheme for the manufacture of Power Alcohol in U. P. and Bihar. We feel that although at present it will be possible to replace only 13 lakhs of gallons of petrol by Power Alcohol with a 20 per cent. mixture in U. P. and Bihar, and for that purpose to consume only 30,000 tons of molasses, it will give some relief to the industry at the present time and there will be a great potentiality of its future development. In a note appended to the report of the U. P. and Bihar Joint Power Alcohol Committee, Mr. M. P. Gandhi has dealt with a few important issues concerning *raison d'être* of the Power Alcohol Industry in the U. P. and Bihar.

Utilisation of Molasses for Reclaiming 'Usar' land.

During the year 1938, the Government of U. P. appointed a Committee consisting of Mr. V. N. Mehta, I.C.S., Chairman and 12 other members, officials and non-officials to examine and report on the suitability of the methods advocated for the reclamation of *usar* land with special reference to the use of molasses etc. During the year experiments were also conducted for the utilisation of molasses for this purpose in the U. P. Amongst other uses of molasses, may be mentioned (1) Cattle-feed, (2) Fertilisers, (3) Reclamation of alkaline (*usar*) lands, (4) Road surfacing and (5) Export. There is not much possibility of export of molasses outside India, at present.

*The representatives of the Bihar and U. P. Governments met the representatives of the Indian Sugar Syndicate Ltd. for a discussion and the methods of starting the manufacture of Power Alcohol, e.g., whether the Power Alcohol distilleries should be located in definite regions, what should be the price fixed for molasses to be delivered to the Power Alcohol distilleries, whether sugar factories would like to fix up any quota system for supply of molasses etc. In view of the terms offered by the U. P. Government, the Board of the Indian Sugar Syndicate Ltd., decided at its meeting held in July, 1939 that it would not like to take the responsibility of running the Power Alcohol Industry. The Board of the Indian Sugar Syndicate passed the following resolution in this behalf.

"In view of the discussions that the Syndicate's deputation had with the Government on the subject, the Board agreed that the terms that the Government proposed to impose on the manufacture of power alcohol from molasses did not warrant the Syndicate to take the financial responsibility involved in the venture and that the matter be left to the individual discretion of member factories."

In this connection we endorse the observations of the Tariff Board that research work should be conducted for better utilisation of molasses in various directions with a view to relieve the factories to as great an extent as possible.

Madras Power Alcohol Committee.

We referred last year to the Committee appointed by the Government of Madras for considering the possibility of utilisation of molasses. The Committee submitted its report in 1939 and recommended that an admixture of Alcohol with petrol for use in motor vehicles is a practical proposition and that it is desirable that the Government should take steps to make use of such mixture compulsory, that in time Madras Presidency may be able to supply all the requirements of absolute Alcohol, that a beginning may be made in suitable areas, and further steps may be taken in the light of the experiences gained there and by the Mysore Government at Mandya.

In regard to the cost of the manufacture of Power Alcohol, the Committee observed that at present the Mandya sugar Factory is the only concern which is manufacturing absolute Alcohol in India. It has a production of 1,500 gallons per day. The cost of production of 90 per cent absolute alcohol has been found to be 0-5-6 per gallon at Mandya. With interest at 6 per cent per annum on the capital, at 10 pies per gallon, which was not included in the calculation and also the cost of de-hydration at 0-1-0 per gallon, the total cost would come to about As. 0-7-4 gallon of absolute alcohol.

The Committee also reported that alcohol of 95-96 per cent. strength unmixed with petrol has been used by the Mandya Sugar Factory with satisfactory results in the running of tractors, lorries, buses and even cars which are provided with special readjusted engines. Mixtures of 60 parts of such alcohol and 40 parts of petrol have also been used for running buses at Bangalore without any adverse effects on the car engines being observed. The Committee also reported that it feels that even if it is eventually found that power alcohol cannot be marketed at the same price as petrol, the Government of India should, in national interests, be urged to face loss of revenue and to levy a lower duty on power alcohol than on petrol. The Committee has no hesitation in recommending that legislation to enforce such mixing is justifiable in national interests. The Chairman of the Committee was Mr. D. N. Strathie, I.C.S. Member of the Board of Revenue & Commissioner of Excise, Madras, and there were 9 other members.

Mysore Power Alcohol Act.

A bill making the sale of all petrol compulsory with an admixture of Alcohol was passed by the Mysore Legislative Council in 1939 and has received the approval of His Highness the Maharaja of Mysore.

In September, 1939, the Government of Mysore notified that with effect from October, 1939, no petrol should, until further orders, be sold or kept for sale except with an admixture of absolute alcohol manufactured in the distillery established by the Mysore Sugar Company, in the districts of Bangalore and Tumker, and including the City of Bangalore. The proportion of petrol and alcohol in the admixtures shall be 85 : 15 by volume.

Utilization of Bagasse produced in factories

Bagasse is the residue of the fibrous matter which remains after the cane is crushed and is an important by-product which can be put to considerable use. At present a large part of this material is used up as fuel in most of the factories. It would indeed be a source of considerable gain to the industry if other economic and commercial uses of the bagasse could be explored. The use of bagasse for the manufacture of paper and boards has been discussed in detail in the "Indian Sugar Industry—Its Past, Present and Future" (1934) *vide* pages 130-139. Besides, other commercial uses may be found out if proper researches are carried on. As long as such other commercial uses are not found out, it would be to the advantage of the industry to use it in the latest type of boilers with a view to ensure that the maximum of heat is generated by the bagasse and to decrease their expenditure on other fuel.

At its meeting in November, 1933 the Sugar Committee had considered the question of the utilisation of bagasse for paper and board industry. The Forest Research Institute was also asked to undertake more extended experiments in the manufacture of paper etc., from sugarcane bagasse. In 1936, the President of the Forest Research Institute put up a note stating that it should be possible to turn out packing and cheap Badami papers from bagasse pulp mixed with about 25 per cent bamboo pulp if the factories were equipped with suitable machinery. Experiments were also made in the laboratory to produce boards from bagasse. Small samples of boards for insulation and structural purposes etc. were made by hand and the material, he states, appears to be quite suitable for the production of

such boards. He states, however, that the Forest Research Institute is not equipped for making boards on a semi-commercial scale.

The unbleached pulp of the bagasse was also bleached in the laboratory of the Forest Research Institute and it was found that it required 9 per cent standard bleaching powder and the yield of bleached pulp was about 41 per cent. The bleach consumption was about 50 per cent higher than that required by such grasses as *Sabai*, *Ulla*, etc., but it compared favourably with that required on the average by bamboos. The average length of the fibre of the material experimented upon was found to be 2 mm., there being a large number of shorter fibres. In this respect the material compared unfavourably with bamboos or *Sabai* grass etc. Considering the above data, the material does not appear to be unsuitable for the manufacture of products like boards, packing and wrapping papers and even certain classes of writing and printing papers in admixture with longer fibred pulps, e.g., bamboo, rags, etc. The possibility, however, of utilising the material for such products depends, firstly, on the quantities available and, secondly, on the price at which it can be made available at the manufacturing site. If the quantities available are only such as are surplus in the most efficient sugar factories, then the supply of the raw materials is likely to be unreliable and also the total quantity available will probably not be large enough to justify putting up a paper or a board factory. According to the Sugar Technologist of the Imperial Council the cost of one ton of bagasse at the sugar factory is likely to be between Rs. 12 and Rs. 14 on the assumption that wood for fuel will cost between Rs. 6 and Rs. 7 per ton. To the above cost of bagasse, the cost of transporting it from the sugar factory to the paper or board factory has to be added. As this cost which may be anything from Rs. 14 to Rs. 18 or more per ton it appears doubtful whether the utilisation of bagasse for paper or board will be more economic than using grasses or bamboos for the purpose. If, however, the price of bagasse is low, and adequate quantities are available, there appears to be nothing against its utilisation for board or paper manufacture. In February 1935, the North Bengal Sugar Mills Company Limited, Gopalpur, informed the Forest Research Institute that about 12,000 tons of bagasse could be made available at their factory at about Rs. 7 per ton and that bamboos were also available in the vicinity. In such cases the utilisation of bagasse for paper or board manufacture would appear to be feasible, provided the bagasse is not of poor fibre-content and other manufacturing facilities are available. To sum up, the bagasse is a

raw material which can be utilised for paper or board manufacture. Each project should however be investigated on its own merits.

We give below a statement showing the quantities and values of packing paper and paste-board, mill-board and card-board of all kinds imported into India during 1934-35 to 1938-39.

TABLE NO. 27

Imports of Packing Paper and Boards into India

Imports	Quantity in 100 cwts					Value in 100 Rs.					
	1934-35	1935-36	1936-37	1937-38	1938-39	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38
Packing Paper	313	405	364	510	387	4535	3181	3817	5301	4805	8399
Total of paste-board, mill-board & card-board of all kinds	416	496	485	633	541	3714	2771	3338	3656	5504	5514

A glance at the above table will show that there exists a market for wrapping paper and board in India a portion of which can be suitably exploited as bagasse can be utilised for the production of some of those qualities.

Large quantities of board for insulation and structural purposes are being manufactured in Louisiana and other countries, notably by the Celo-tex Company, in Louisiana. The suitability of bagasse for the above purposes depends to a considerable extent on the quality of fibre present in it. The experiments conducted at the Forest Research Institute, Dehra Dun, with Indian bagasse have been very encouraging in regard to the suitability of Indian bagasse for paper and board manufacture. The only important defect in Indian bagasse appears to be the short length of its fibres.

In a Note on the utilisation of bagasse for paper, submitted to the Sugar Committee in March, 1938, Mr. R. C. Srivastava, Director, Imperial Institute of Sugar Technology observed that bagasse at present was being used as fuel in factories. Some bagasse was saved by factories which may be used for raising power during off-season.

If bagasse is not to be made available for other purposes, it would be necessary to replace it by other fuel, by wood or coal. It is clear therefore that unless a cheap and suitable fuel is found, it will not be possible at present to use bagasse for making card board and packing papers at prices comparable to prevailing prices of such materials. But if the fuel efficiency of Indian factories improves, some surplus bagasse may be available.

Wood as a substitute for bagasse can be burnt in bagasse furnaces either by itself or in admixture with bagasse. But the price for the same fuel value is likely to be high. The calorific value of dry bagasse may be taken as 8100-8350 B.T.U. whereas that of wood is 4500-5000 B.T.U. On the basis of these fuel values therefore the selling price of bagasse, when wood is a substitute, may be taken at nearly twice the price of wood ex-factory. If the ex-factory price of wood is Rs. 6 to Rs. 7 per ton which is a comparatively low figure for most parts of the U. P. and Bihar, the price of bagasse will come to Rs. 12 to Rs. 14 per ton.

Coal, unless it is much cheaper than wood, is not a very desirable substitute for bagasse as it is difficult ordinarily to burn it in bagasse boilers, even when they are filled with auxiliary coal furnaces. To get the maximum heat value from coal, separate boilers will have to be installed. This would be an expensive addition, and factories may not be willing to put themselves to this expenditure unless they were assured of their market for bagasse for a long period.

The calorific value of bagasse is about two-thirds of that of coal and therefore the price of bagasse when coal is used as a substitute may be estimated to be about equal to the value of the coal at the factory in consideration of the changes in equipment that may be necessary. The average price of coal at the collieries in Bengal at present is about Rs. 3 a ton. The transport charges from the colliery to the factory will have to be added. Amongst other items affecting the price of bagasse ex-sugar factory are the costs of baling, storage, handling charges and the transport of bagasse. The baling of bagasse for transport is a very important item and for this separate equipment and staff will be necessary at each purchasing centre. (The Saraya Sugar Factory of Sardarnagar is baling its bagasse and keeping it properly packed up). After allowing for these charges as also for the transport of bagasse, it has been computed that the cost of dry bagasse at the Celotex Company at Louisiana is about Rs. 9 per ton. It may be possible to get bagasse at this rate in the case of a

board factory situated in Bihar and Bengal nearer the collieries, if coal is available at a low price. It is true that "the improved canes now grown in northern India have a relatively high fibre-content," as is observed by the Imperial Council of Agricultural Research. In fact, they are amongst the most fibrous canes in the world. Reports from several factories in India show, however, that at present all of them are using varying quantities of extra fuel. Fuel consumption and steam economy have not reached a sufficiently high standard of efficiency in the Indian factories to permit of large quantities of bagasse being spared. Therefore, at present bagasse can be made available for paper and board manufacture only by replacing by wood or coal. Wood being a costly fuel as compared with coal, bagasse can only be had at a reasonable price from factories in Bihar which are located nearer the collieries.

The quantity of cane crushed by factories in Bihar and Bengal may be estimated at say 1,826,300 tons and the dry bagasse production at about 250,000 tons per year. The minimum economic capacity of a fibre-board factory is 20 to 25 tons dry bagasse per day or 7,000 to 7,500 tons per year. Therefore, even if the factories in Bihar and Bengal substitute only 10 per cent of their bagasse by coal, there would appear to be scope for running a board factory, but due investigation should be made for determining the consumption of insulation and pressed boards in India, and the cost of production of such boards. The number of sugar factories in Bengal being very few, there is little possibility of establishing a board factory in Bengal. Bihar appears to be a more suitable place for the location of such a factory, in tracts where sugar factories are sufficiently near to the collieries. If a Board factory could be established, alongside a sugar factory that would be an ideal situation from the point of view of the raw material. One such factory has been established in 1939-40 at Meerut.

In a Note on this subject Mr. M. P. Bhargava, Officer-in-Charge of the Paper Pulp Section, Forest Research Institute, at Dehra Dun, observed in 1937 that in view of the fact that there was an adequate and permanent demand for boards and packing papers which was likely to grow considerably in the future there appeared to be no ground for the fear that the demand for bagasse for manufacturing these products might not be a permanent one, particularly as no other raw material for the industry was likely to be obtained at a cheaper price. The sugar factories therefore, needed to have no hesitation on the score of demand to incur the expenditure necessary for effecting a change in their boiler equipments. If a few sugar factories

changed their entire boiler equipment with a view to supply bagasse to a board factory, it would be more economical as the supply would be more uniform, and baling, handling and transport charges would be minimum. The markets for boards and packing papers manufactured in Bihar would not only lie in Bihar and Bengal but throughout the country particularly in Bombay and Sind which import about half the total products. It would be very helpful if this question was considered carefully with a view to establish a new subsidiary industry in the country.*

It is understood that a technical programme of experimental work in connection with the utilisation of bagasse for the production of the Sugar Committee of the Imperial Council of Agricultural Research and that arrangement has been made for the testing of the heat and sound properties of the boards prepared at the Forest Research Institute.

We understand that the Forest Research Institute at Dehra Dun has recently obtained equipment for making boards from bagasse and systematic investigations have also recently commenced. We also understand that the Institute has recently submitted *interim* reports on the investigation carried out till June, 1939, on the production of insulation and pressed boards from bagasse, to the Imperial Council of Agricultural Research.

The Problem of Marketing Sugar

We have referred in detail already to the problems now facing the industry, namely the marketing of sugar in a manner which would safeguard the interests of the industry and avoid fluctuations in the price of sugar to as great an extent as possible. The annual production of sugar in India would normally be equal to the present annual estimated consumption of sugar and with a satisfactory crushing season it is likely to be a little bigger from 1940-41 onwards. The last two seasons for the industry have been exceptionally short and we expect the production of sugar in 1939-40 also to be smaller than the expected consumption.

*This question was considered at a meeting of the Sugar Committee held in March, 1938, when a few samples of the boards manufactured at Dehra Dun from bagasse obtained from Daurala were also exhibited. The Institute at Dehra Dun will draw up estimates of cost of production as soon as brands comparable to Celotex have been prepared.

The Jaswant Sugar Mills Limited, Meerut, established a plant for the manufacture of Straw-board in 1939-40.

We have already observed that most of the sugar—more than 85 per cent of the sugar produced in India,—if *khandsari* sugar and sugar produced from *gur* are included—is produced in the U. P. and Bihar and this production is far in excess of the consumption of these provinces and this necessitates a scientific marketing of sugar in the various parts of the country in a manner which would avoid overlapping, which would eliminate internal unrestrained competition, which would minimise freight charges by a well ordered system of distribution from various producing centres to the nearest consuming markets, and would also eliminate import of foreign sugar at the ports, where it can compete more easily than in the hinterland, with a view to preserve the Indian market entirely for indigenous sugar.

Carry-over of 2 lakhs tons sugar necessary

Elsewhere, in this Annual, we have referred to the necessity of the Indian Sugar Syndicate extending its present activities by taking up *direct* sales of sugar in place of the present system of issuing of quotas periodically and fixation of the prices of sugar at which sugar can be sold by the member factories. Due to the smaller production of sugar during the last two seasons, the Syndicate experienced no difficulty in managing the sales but unless the scope of activities of the Indian Sugar Syndicate is enlarged in a manner in which it would control the production and the proper distribution and despatch of sugar to all parts of the country according to the requirements at different times, it will not be possible to control prices satisfactorily and to eliminate the factor of the lack of stability in the prices of sugar which has greatly affected consumption. For that purpose, it is necessary that the production of sugar normally should be such that there would be a carry over of about two lacks of tons of sugar from one season to another. Such a carry over could be utilised in meeting the shortage in the production, if any, that may arise in the following season on account of natural causes over which the industry can have no control, e.g., drought, floods, disease, etc. To that end, the production of cane should also be regulated as the extent of production of sugar depends on the cultivation and supply of cane. It is not difficult to devise a scheme whereby the production of cane can be regulated in a suitable manner.

It will be of interest to see the figures for production, consumption and *per capita* consumption of sugar in the various provinces of India for the period from 1st November, 1934 to 31st October, 1935, 1st November 1935 to 31st October 1936, and from 1st November 1936 to 31st October 1937. Table no 28 gives these statistics.

TABLE NO. 28*

Consumption of Sugar by Provinces (November-October).

Name of Province.	1934-35 (Nov.-Oct.)			1935-36 (Nov.-Oct.)			1936-37 (Nov.-Oct.)		
	Production in (00's tons.	Consumption in 000's tons.	Per capita Consumption in lbs.	Production in 000's tons.	Consumption in 000's tons.	Per capita Consumption in lbs.	Production in 000's tons.	Consumption in 000's tons.	Per capita Consumption in lbs.
	Tons.	Tons.	lbs.	Tons.	Tons.	lbs.	Tons.	Tons.	lbs.
Bengal	19	140	5.9	31	158	6.7	174	24	7.3
Bombay	33	243	18.0	36	212	15.5	223	38	16.2
Madras	29	85	3.4	34	72	2.8	100	21	3.9
Bihar and Orissa ...	189	57	2.9	258	62	3.1	70	329	3.5
United Provinces ...	444	124	5.4	647	131	5.6	125	608	5.4
Punjab (N.W.F.P.) Delhi	27	213	13.5	89	233	14.6	265	14	16.5
C P. and Berar	40	4.8	...	40	5.1	43	...	4.9
Assam	11	2.5	...	14	3.5	17	...	3.6
Sind and British Balu- chistan	20	8.8	...	22	9.5	25	...	10.2
Rajputana	49	8.9	...	53	9.5	58	...	10.6
Central India	26	5.5	...	28	6.1	35	...	6.4
Nizam's Territory	17	2.5	...	18	2.6	19	...	2.7
Kashmir	2	1.5	...	2	1.2	3	...	1.7
Mysore	5	1.5	...	8	2.6	10	...	2.9
Burma	27	3.9	...	21	3.1
ALL-INDIA	1,059	6.5	...	1,074	6.5	1,167	...	7.3

A glance at the above table will show that U. P. and Bihar which produced about 85 per cent of the total sugar in India in 1936-37 consumed only about 16 per cent of the total production while Bombay and Punjab which produced only 7 per cent consumed over 30 per cent. The *per capita consumption* varies widely in the provinces being the highest in Bombay and the lowest in the Indian States.

The variation in the *per capita* consumption is due to several factors. A province which consumes less sugar may be consuming relatively more *gur* and *vice versa*. The consumption of sugar also depends on the strength of the urban population in the provinces since the agriculturists consume very little sugar. Differences in tastes and habits of the people would also account for a wide variation in the provincial *per capita* figures for consumption. For instance, the traditional liking for hot curries and sour stuff like tamarind, curd

*Vide Review of the Sugar Trade of India 1937-38 in the *Indian Trade Journal*, dated 2nd November, 1939 and previous issues.

etc. in Madras and the comparative indifference to sweets is reflected in the *per capita* figure for consumption being as low as 3.9 lbs.

These statistics of consumption, it must be observed, are in the nature of estimates. As the statistics of the market stocks improve, and the figures of despatches from various factories to various markets become available through the Indian Sugar Syndicate which has started collecting such information from the various factories from the beginning of the year 1938, it will be possible to put forward more reliable figures for consumption of sugar in the various areas. The figures given in the above Table have been compiled by the Director of the Imperial Institute of Sugar Technology, Cawnpore and published in the Indian Trade Journal dated 2nd November, 1939. In calculating the requirements of Sugar two items have not been taken into account, namely the difference between initial and closing invisible stocks in certain interior markets and (2) imports and exports of sugar. It is believed that initial and closing invisible stocks do not differ widely and that very little sugar is transported by road over long distances.

The following table gives the Imports and Exports of sugar by rail and river in the various provinces in India for the years 1935-36 and 1936-37.

TABLE NO. 29

Imports and Exports of Sugar for Provinces and States according to the Rail and River-borne Trade Returns in 1935-36 and 1936-37.

	1935-36		1936-37	
	Imports Tons	Exports Tons	Imports Tons	Exports Tons
Punjab, N.W.F.P. and Delhi	214,176	1,349	249,613	2,641
United Provinces	6,600	475,000	7,871	576,361
Bihar and Orissa	10,645	160,623	13,922	260,347
Bengal	140,667	15,700	173,075	17,353
Madras	49,335	25,081	97,411	26,747
Bombay	149,213	48,427	200,608	47,814
Assam	14,386	112	16,144	75
Central Provinces and Berar	39,360	180	41,713	338
Sind and British Baluchistan	46,900	27,000	66,757	28,500
Mysore	23,22	17,600	1,122	15,669
Hyderabad	17,500	30	19,325	79
Kashmir	2,211	11	2,629	...
Central India	23,895	783	29,335	358
Rajputana	53,019	121	56,821	63

Indian States which fall within the boundary of a province, are included in that Province.

Modus operandi of the Indian Sugar Syndicate Ltd.

In our 1938 Annual, we referred in detail to the circumstances that led to the establishment of the Indian Sugar Syndicate, first on a voluntary basis in July 1937 comprising about 92 sugar Factories in U. P. Bihar and other provinces in India, four being from the Punjab, five from Bengal and four from Bombay, and later in 1938, comprising *all* factories working in the United Provinces and Bihar as a result of the passage of the Sugar Factories Control Acts in the provinces of U. P. and Bihar whereby all factories were compelled to take out a license for the crushing of cane (one of the conditions for the issue of such license by the Provincial Government was membership of the Indian Sugar Syndicate Limited which was recognised under Section 11(a) of the Act, as the organisation for regulating the sale of sugar). We have also referred to the successful working of the Indian Sugar Syndicate during the year 1937-38.

During the crushing season 1938-39 the Syndicate had 108 factories as its members, 71 from the U. P., 34 from Bihar and 3 from Bengal.* Of these, 101 member factories operated during the 1938-39 season. The total manufacture of sugar by the members of the Syndicate came to 1,32,54,384 maunds for the season 1938-39 roughly approximating to 4,90,000 tons out of a total production of 6,50,800 tons in India.

The total stock of sugar pooled by the members of the Syndicate was the same as the total quantity of sugar manufactured, less the amount earmarked by the sugar factories at the commencement of the season for the requirements of the manufacture of confectionery etc. The sale of this stock of sugar was made by the Syndicate during the year, just as was done in the previous year through a system of quotas which were issued in definite percentages covering definite periods, and the factories sold their sugar *themselves* at the rates fixed by the Syndicate, or higher if such prices were available during each period. on page 260, will be found a short account as to how the quota were released during the year, 1938-39.

Fixation of basic prices of sugar by the Syndicate.

The basis for the fixation of basic prices of sugar was determined by a resolution passed at an extra-ordinary general meeting held on the 28th January, 1938.

*The three factories from Bengal resigned from the membership of the Syndicate at the close of the 1938-39 season as they were under no compulsion to become members of the Syndicate.

In the season 1938-39 the same basis and the same method of calculation was followed, as in 1937-38.

The chart of the previous season was adjusted to the revised Indian Sugar Standards and it was found that the previous basis of B24 Nawabganj would under the new Standards be C24. The sum of Rs. 2-4-6 on account of increase in the cost of production caused by the increase in the prices of cane, the provincial cess on cane and the increase in the cost of manufacture owing to expected lower output of each factory was added to the previous price of this grade of sugar. The new chart was prepared on this basis. It was found necessary to add to the chart two more grain grades, one being between the sizes A and B and the second being finer than E.

The final chart of prices was as follows:—

TABLE NO. 30

Syndicate's Grading & Price Chart per Maund of Sugar for 1938-39.

CRYSTALS.

Colour :	26	25	24	23	22	21	20	19
(Grain) { A Rs.	9/11/6	9/10/6	9/9/0	9/8/0	9/5/6
AB,	9/10/0	9/9/6	9/8/3	9/7/3	9/5/0
B "	9/9/6	9/8/6	9/7/6	9/6/6	9/4/6
C "	9/8/0	9/7/0	9/6/6	9/5/3	9/4/6	9/3/6	9/2/6	9/1/6
D "	9/7/6	9/6/6	9/6/0	9/5/0	9/4/0	9/3/0	9/2/0	9/1/0
E "	9/7/0	9/6/0	9/5/6	9/4/6	9/3/6	9/2/6	9/1/6	9/0/6
FINE	9/6/0	9/5/6	9/5/0	9/4/0	9/3/0	9/2/6	9/1/6	9/0/6
Crushed Sugar			9	...	9/4/-			
			10	...	9/7/-			
			11	...	9/8/-			
			12	...	9/9/-			

Note : All the above rates are for sugar of over 96 Pol.

This basis having been approved at the General meeting on the 28th December, 1938, a sub-Committee appointed on the same lines as last year, fixed the basic prices of members' sugar and no revision was found necessary throughout the season. The selling rate was fixed at 0-1-0 above the basic rate fixed for the sugar of all factories, and was not varied throughout the season.

Selling orders were released from 16th December, 1938, onwards. A meeting of the members of the Syndicate was held on 13th November, 1938, in order to fix the dates of starting of crushing. Although no effectual decision could not be arrived at so as to bind all the factories, yet voluntary agreements were arranged between

factories in groups not to start crushing before definite dates which were agreed upon, and were very useful in preventing crushing of immature cane and inter-factory competition in the purchase of cane in free areas.

Owing to the fact that members had started crushing at various dates, it was found on 16th December, 1938, that only a few factories had sugar available for sales, and a quantity equal to 50 per cent. of the first ten days' production of each factory was released as the First Selling Order, but very soon release of further quantities for sale was found necessary, and on the 31st of December, 1938, a further quantity to make up 31 lacs of maunds was released. This was distributed amongst members in proportion to their capacity. This quantity was to be sold strictly on Ready Sale Basis, and not in anticipation of production. As in the case of many factories, basic prices had not been fixed, interim basic prices were fixed for Standard Grades by adding Rs. 2-4-6 to the last season's price of that grade and this interim price held good, until the fixation of new basic prices. To ensure the new season's sugar being immediately put into the market, it was decided that all despatches should be completed by the 15th of January, 1939, on pain of undespached quantities being considered as cancelled and unsold. Later, this condition was relaxed to this extent, that instead of despatches being actually effected, it was required that despatching instructions must be received within the time prescribed by the contracts. It was made necessary that the conditions of the contract should be strictly enforced with regard to this matter.

This method of apportionment of quantities between the members was later changed to a proportion of actual manufacture, and in the Second Selling Order issued on the 21st January, 1939, it was decided to release 70 per cent. of the new season's manufacture upto 15th January, 1939 inclusive of the quantities already released, and adjustments were made to bring all factories to the same parity. By this time, the prospects of the season's crop were more visible and it was feared that a considerable quantity of sugar would have to be imported for the country's requirements and that this quantity would naturally increase unless prices of Indian sugars were kept at a low level. Accordingly in the 3rd Selling Order issued on the 6th February, 1939, it was decided to release the entire manufacture of new season upto 31st January, 1939, including the quantities already released. Even this was not found sufficient to bring down prices and finally on the 7th March, 1939, the 4th Selling Order of the entire unsold

balance of the 1938-39 season's production, whether manufactured or still to be manufactured, was released for sale. As a necessary corollary, sales were permitted on forward basis upon the conditions of the terms of the Standard Contract Form being strictly followed with regard to the receipt of despatching instructions. The members were only permitted to bind themselves for deliveries upto 31st of August at the latest, any deliveries made after that date being considered unauthorised.

Throughout the season, stress was laid on the strict enforcement of the Contract in order to promote actual consumption of sugar. The exact position with regard to imports of foreign sugar and of the provincial distribution of Indian sugars was circulated to members from time to time in order guide them in their sales. Very soon it was clear that an overbrought position existed with regard to foreign sugars and the consumption and sale of Indian sugars was being retarded. On the 14th July, 1939 it was found necessary to extend the period for sale of the 4th Selling Order from 31st August, 1939 to 15th September, 1939 with the condition that all despatches under these scales had to be completed on or before the 30th October and strictly in accordance with the terms of the Standard Contract Form. It was found that owing to an overbought position, merchants who had purchased Indian sugars were, in many cases, unable to give despatching instructions within the time provided in the contract, and in order to assist the trade, it was decided to permit members to extend the time till the end of the month in such cases as they considered fit. This was of some help, but the position again became difficult, and ultimately on the 29th July, 1939, it was decided that the time for giving despatching instructions against all existing contracts upto July delivery may be extended to 15th August, 1939 and those for August delivery may be extended to 31st August, 1939. Fresh sales were suspended upto 15th August, 1939, and members were to sell their unsold quantity between 16th August and 7th October ready or forward subject to the conditions of the Standard Contract Form that all deliveries are to be completed by 31st October, 1939. It was decided that in case of buyer's default, members should not cancel their sales but should only make resales on buyer's account. It was expected that the entire quantity produced in the season would have been cleared off before 31st October. The physical stock of sugar as on 31st October, 1939, with member factories of the Syndicate was 6,03,418 maunds, approximating to 22,300 tons.

We give below a chart showing the particulars of selling orders released during the season 1938-39 by the Indian Sugar Syndicate:

TABLE NO. 31

*Particulars of selling orders released during season 1938-39
by the Indian Sugar Syndicate*

Selling Order No.	Date of Release.	Basis of Calculation.	Quantity Released		Selling Rates.
			(Maunds.)		Rs.
1.	16th December 1938.	50% of first 10 days' Production	31,37,705	...	-1/- above basic rates.
1A.	21st December 1938.	70% of last years 1st Feb., to 24th Feb., Production ...			
		<i>Less.</i>			
		Quantity adjusted while releasing next Selling Order ...	1,93,360	29,44,345	Do
2.	21st January 1939.	70% of manufacture up to 14th January 1939, less Selling Orders 1 & 1A	14,04,108	Do
3.	6th February 1939.	Balance of total manufacture upto 31st January 1939	46,51,624	Do
4.	9th March 1939.	Balance of season's entire Production	42,37,497	Do
		Total ...		1,32,37,574	

The Syndicate effects its sales since its inception in 1937, by fixation of quotas and prices from time to time, through the members. The Syndicate has under contemplation a scheme of taking over *direct* sales of sugar in its own hands, using as far as possible the present agency of its members for the sale of their sugar, but looking to the attitude of some members, it remains to be seen when it will be put into execution.

As the Syndicate acquires more data and more experience, it should be possible for it to undertake direct sales of sugar which will enable it to save freight charges by an orderly distribution of sugar in the adjacent markets eliminating cross-haulage of traffic in sugar. At present all sales are ready sales which mean delivery within seven

days. The Syndicate does not normally permit forward sales at all, but in 1938-39 it did so with a view to put larger quantities of sugar in the market and to arrest the increase in prices, brought about as a result of the activity of speculators.

While the ownership of the sugar produced by the factories within the membership of the Syndicate rests in the Syndicate, the factories remain as trustees for the safe custody and storage of the sugar manufactured by them. The Syndicate does not make any payment to the members for the sugar produced or sold by the factories. The factories realise the money direct from the buyers as and when sales are made in accordance with the permission given by the Syndicate. The Syndicate also permits factories to hypothecate their stocks to banks or bankers and take advances on them for their convenience.

All throughout the season there was no variation in the selling rate as was made in the 1937-38 season, the selling rate being one anna higher than the basic rate. The Syndicate defrays its expenses from this Rate Earning of one anna per maund, and in 1937-38, the approximate expenditure per maund of sugar came to about 0-0-5 per maund.

To facilitate the conduct of the routine work of the Syndicate there were two Standing Committees appointed by the Board, one, the Basic Price Fixation Committee for new samples, and the other, the Advisory Committee to assist the Chairman. The procedure adopted for new samples was that their rates were fixed by the Directors and the Members concerned were duly informed immediately. But these rates were only tentative, until the rates fixed were confirmed formally at the next Board Meeting.

No extension in U. P. and Bihar at present.

In 1939 several meetings of the Sugar Control Board were held to discuss matters of interest to the industry. Amongst the most important questions discussed were those pertaining to the regulation of production of cane and of sugar, the basis of fixing cane prices, the necessity of the establishment of inter-provincial Research Organisation for improving the quality of cane, the permission for extensions of existing factories and the establishment of new ones etc. We have referred already to the fact that during the year the U. P. Government gave permission liberally for extensions of the plants of several factories and to the fact that exception was taken by the Indian Sugar

Syndicate to the same with a view to prevent the increase in the present capacity of the factories in U. P. and Bihar. The Board of the Sugar Syndicate also appointed a technical Committee to deal with the applications submitted by the factories to the Government for extensions and to make recommendations to Government in regard to them. The point of view of the Government of U. P. appeared to be that factories might be permitted to add machinery to their plant which may equip them for increasing their efficiency, but a condition should be imposed that they should not increase their crushing by more than 5 per cent. of the existing capacity. There was a considerable difference between the point of view of the industry and the Government. The industry was anxious to protect itself against undue and unnecessary expansion. The difficulty is increased owing to the fact that certain factories who are small units claim that they should be permitted to extend in order to make themselves into economic units. This has been conceded by Government in cases where sufficient cane is available for the enhanced capacity. Permission was also given to shift one plant of 1,000 tons hitherto not working from Bihar to U. P. and to license two plants of 1,000 tons each which were claimed to be under construction when the Act came into force. Extensions to make economic units have also been granted to a number of factories.

Towards the close of the 1938-39 season the Government of U. P. and Bihar had joint consultations with the representatives of the Indian Sugar Syndicate for the purpose of determining the conditions for the grant of licenses for extensions to factories. It is hoped that as a result of such discussions the conflict of views that existed between the Syndicate and the Government in regard to the appropriateness of granting extensions will be removed.

Industry's views Re: Minimum Price of Sugar Cane in 1938-39

We have already referred the fact that during the 1938-39 season the Government of U. P. and Bihar fixed an irreducible minimum price of cane the beginning of the season but later increased it due to the increase in the prices of sugar. We have also referred to the action taken by the Syndicate in this respect and have also narrated the circumstances which led to a change in the policy of the U. P. and Bihar Governments by which they decided to abandon the practice adopted in the previous season of fixing a single irreducible minimum price of cane, and to introduce a scale according to which the minimum price of cane would be linked with the ruling price of sugar and the minimum price of cane would be altered every fortnight in accordance therewith.

We have also indicated that in our view it would be preferable to fix a single irreducible minimum price of cane which would not vary throughout the season except under most exceptional circumstances. The advantage of this would be that both the cultivator and the manufacturer would understand their position exactly and regulate the production of cane, sugar and the prices suitably.

The syndicate represented to Government against the original high prices of cane, against subsequent increases and against the principle of fixing different cane prices in different areas, but Government maintained the prices, and laid down that they were justified on account of the rise in selling prices of sugar and that the grower was entitled to a share in the higher prices that were being received by the factories.

It was also pointed out by the Syndicate that owing to the shortness of the cane crop, the cost of manufacture per maund had risen very high, and there should not be an increase in the price of cane but the Government of U. P. and Bihar did not see their way to lower the cane prices.

Cess of 0-0-6 per maund of sugar cane in U. P. and Bihar.

At the commencement of the 1938-39 season, the Governments of U. P. and Bihar levied a cess of 0-0-6 per maund on cane consumed by factories in U. P. and Bihar. The proceeds of the cess which are expected to be Rs. 40 lakhs in the U. P. and Rs. 21 lakhs in the normal season will be spent mainly for purposes of development of cane, although no assurance to that effect has been given definitely by the Governments of U. P. and Bihar. This cess has been continued in 1939-40 season also. No other Provincial Government levies such a cess on cane.

Mass Literacy Campaign

We are glad to say that as a result of the appeal made by the popular Minister of Education and Development, Bihar, the Honourable Dr. Saiyid Mahmud, in the year 1938, a large number of sugar factories have assisted the scheme of extension of mass literacy in Bihar. Several factories have opened a net-work of literacy centres and have contributed towards that end. We hope that the factories will continue to take an interest in this matter, although primarily it is, and should remain, a voluntary measures of assistance by the factories.

Consolidation of Holdings in U. P.

In 1939, the U. P. Government passed the U. P. Consolidation of Holdings Act, 1939. The object of the Act is to provide for the development of agriculture through the consolidation of agricultural holdings.

The object of the consolidation is to make the fields held by an individual cultivator contiguous so that he can pass from the one to the other without traversing the land which is not his own. As a result of such consolidation, it is expected that the cultivator would be having compact areas in one place in his possession, big enough to permit the use of improved methods of agriculture. The industry can take advantage of the provision of the Act with a view to the improvement of cane cultivation.

*Necessity of early announcement of minimum prices of sugarcane.**Mr. Gandhi's Resolution accepted by Sugar Control Board*

The Governments of U. P. and Bihar do not announce the minimum price of cane sufficiently well in advance every season. Mr. M. P. Gandhi brought up for consideration of the Sugar Control Board of the U. P. and Bihar a resolution on this subject at its 9th Meeting held at Lucknow on the 24th October, 1939. The resolution recommended that in order to enable the sugar factories to decide about the date of the commencement of the crushing operations, which depends upon the price of cane fixed by the Governments of U. P. and Bihar, the Government should make a final announcement of minimum price of sugarcane at least three weeks in advance of the expected date of commencement of crushing operations, and in any case not later than the 15th October, each year. The Sugar Control Board considered the suggestion to be reasonable and recommended that the two Governments should take suitable action upon it.

It is now for the Industry to press the Government for the final announcement re. minimum cane prices to be made in good time, every season.

Bureau of Sugar Standards.

At a Conference of representatives of Sugar mill-owners convened in 1934 in Calcutta under the auspices of the Indian Sugar Mills Association a Special Sub-Committee was appointed to formulate definite proposals for fixation of sugar standards. This Sub-Committee

tee under the Chairmanship of the Sugar Technologist submitted proposals which were accepted with slight modifications by the manufacturers. These standards of sugar were accepted at a Conference of Sugar mill-owners held at Cawnpore on the 26th August, 1934 and these standards of sugar have been revised in the light of experience gained. The Sugar mill-owners were unanimous in holding that the work of preparation and distribution of sugar standards should be entrusted to the Sugar Technologist (now the Director). A Bureau of Sugar Standards was also established, and started working from 1st March, 1935. The scheme for a Bureau of Sugar Standards was adopted by the Imperial Council of Agricultural Research with certain modifications and the necessary funds were also sanctioned for the purpose. The main functions of the Bureau of Sugar Standards are:—

- (1) The preparation and supply of Sugar Standards every year;
- (2) The publication of an annual review dealing with the quality of Indian Sugars and giving comparative figures for competitive foreign sugars; and
- (3) The Maintenance of a Museum of samples of sugar and sugar products.

The Imperial Council of Agricultural Research also approved that the Director of the Institute should collaborate with representatives of sugar manufacturers of the dealers and brokers in the preparation of sugar standards. For this purpose an Advisory Committee has also been set up consisting of 10 Members. The Director of the Institute is the Chairman of this Advisory Committee which includes four representatives of sugar manufactures and four representatives of sugar merchants and brokers.

The Bureau of Sugar Standards is attached to the Office of the Director of the Imperial Institute of Sugar Technology, at Cawnpore. The sets of Standards of Sugar prepared by the Bureau of Sugar Standards were first made available to the Industry from August, 1935.

Due to deterioration, the colour of sugar changes and for this reason the Standard Grades are prepared and issued every year. Although the Standard Sets are available for sale each year from July 1st, they come into force from November 1st and remain valid till October of the following year.

*Review of Quality of Sugar in 1938-39.**

In August, 1939, the Director of the Imperial Institute of Sugar Technology published a review of the quality of sugar manufactured in India by Central Sugar Factories and Refineries during the season 1938-39. The total number of samples received from factories was 231 as against 266 last year. The unexpectedly short season and sudden closing down of most of the factories due to shortage of cane has been responsible for the drop in the number of factories sending samples as well as the number of samples. As in the previous seasons, the samples continued to bear a very large number of quality designations, among these being, Special, First Crystal Special, First Standard B Special, Red, White, Green, Superfine, etc. Only one factory denoted the quality of its production in terms of the Standards. The number of grades of sugar manufactured from each factory during the 1938-39 season, as worked out from the number of factories received are given in the following table:—

TABLE NO. 32

Analysis of Number of Grades of Sugar made by each Factory in 1938-39 based on Returns received from 99 Factories.

Serial No.	Particular	No. of Factories	Percentage 1938-39	Percentage 1937-38
1	Factories making only one grade of Sugar	26	26.26	22.32
2	Factories making two grades of Sugar	34	34.34	39.28
3	do do three do do	26	26.26	25.00
4	do do four do do	7	7.08	8.92
5	do do five do do	6	...	2.68
6	do do six do do	...	6.06	0.90
10	do do ten do do	0.90
	Total	99	100.00	100.00

It will be evident from this table that there has been no reduction in the production of too many grades and the percentages of factories making different grades remain about the same as in 1937-38. The percentage of factories producing only one grade of sugar, has, however, increased.

As in previous years, most of the samples were mixtures of varying grain sizes and the big and medium grain sugars lacked brilliance and

* *Vide* Review of the Quality of Sugar manufactured by Central Sugar Factories and Refineries in India during the Season 1938-39 by Mr. R. C. Srivastava, Director, Imperial Institute of Sugar Technology, published on 10th August, 1939.

contained twin and joint mixed crystals. The quantity of sugar produced in 1938-39 is about same as in 1937-38, but there is a definite tendency towards the production of superior quality sugars, the number of samples corresponding to I. S. S. 26 alone having increased to 17 in 1938-39 from 7 in 1937-38.

The Indian Sugar Standards provide a common scale for assessing sugar quality in place of numerous quality designations at present in use. The Director of the Imperial Institute of Sugar Technology hopes that the recent adoption of the Standards should provide a fresh impetus to a spirit of healthy competition for the improvement of quality.

Co-operation of Railways.

The rapid and phenomenal development of the Sugar Industry in this country called for an effective co-operation on the part of Railways and Steamship Companies in order to find markets at distant ports and internal centres, and we must observe that such co-operation has been forthcoming from the various Transport Agencies. Facilities in the shape of Sidings, and handling of this traffic and Concessions in rates, which enabled the Sugar Industry to reduce the prices, where such was possible, were given. The Railways in India have realised the necessity of reducing freight rates on sugar to the ports and other internal markets for the mutual benefit of the Industry and themselves. The extent to which Railways have benefited from the Sugar Industry during the last five years can be seen the relevant tables of Sugar and Sugarcane movement given in the "*Sugar Industry at a Glance*."

While the attitude of the Railways has been generally helpful in permitting concessions in rates, there still remains a lot to be done. For instance, the N. W. Railway has yet to accept the lead given by various other Railways for the benefit of the transport of Sugar and Molasses produced in the factories situated on their line.

Railway Freights on Sugar.

Railway freights admittedly play a very important part in the development of industries in a country and they can do a lot more than any other organisation in implementing the policy adopted by the Government from time to time, of advancing and stabilising industrial development of the country. The freight rates to various ports such as Bombay, Karachi, Madras, Coconada, Vizagapatam, Amedabad and Calcutta from the factories in Bihar and United Provinces, still remain at a higher level and the replacement of these rates

by a flat rate of annas 0-13-0 per maund to these destinations is once again urged.

We have to observe that the East Indian Railway in conjunction with the B. & N. W. Railway, made further reductions in the rates from certain Sugar factories on the B. & N. W. Railway to Howrah from 1-11-1938. These reductions amounted to about six pies per maund.

The earnings of the Railways from the traffic of Sugar and Sugarcane was about Rs. 2,22,00,000/- in 1937-38 as compared with Rs. 1,29,00,000/- in 1932-33. The total tonnage of sugar carried was 20,47,000 tons in 1937-38 as compared with 1,057,000 tons in 1932-33.

The facility of through booking of Sugar to Rangoon from stations on the R. & K. Railway was also notified by the E. I. Railway with effect from 1st February, 1939.

Sugar is being carried with effect from 1st October, 1936, on the E. I., B. & N. W. and R. & K. Railways to Howrah and from Howrah to Rangoon and Akyab per steamer on through railway receipts; the charges from Howrah (Riverside Shed) to Rangoon being Ass. 0-6-0 per maund and to Akyab As. 0-8-3 per maund. The steamer charge is inclusive of all charges for transporting goods from Howrah on Board the Steamers, Port Dues, cost of Bill of Lading, fees and all other incidental expenses etc. at Calcutta. The table below indicates the current rates on Sugar from a few factories located on the East Indian Railway and the B. & N. W. Railway to Bombay, Karachi, Madras, Vizagapatam, Coconada, Howrah, Rangoon, Ahmedabad and Tuticorin.

TABLE NO. 33

Railway freight O. R. on sugar per maund from certain stations on the East Indian Railway and B. & N. W. Ry. to various Ports & Towns.

From Station		To Bombay	To Karachi	To Madras	To Vizagapatam Town	To Coconada	To Howrah	To Rangoon	To Ahmedabad	To Tuticorin
Dehri-on sone	E. I. Ry. Rs.	1-0-0	1-1-3	0-14-5	0-14-5	0-14-5	0-8-3	0-14-3	1-0-0	0-14-5
Bihta	"	1-0-0	1-1-3	0-14-5	0-14-5	0-14-5	0-7-3	0-14-3	1-0-0	0-14-7
Guraru	"	1-0-0	1-1-3	0-14-5	0-14-5	0-14-5	0-7-11	0-13-11	1-0-0	0-14-5
Rosa	"	1-0-0	1-0-0	1-2-0	"	"	"	"	1-0-0	"
Lucknow	"	1-0-0	1-0-0	1-2-0	"	"	"	"	1-0-0	"
Motihari	"	1-1-6	1-2-0	1-0-0	1-0-0	1-0-0	0-11-8	1-1-6	1-2-0	1-2-2
Basti	"	1-0-3	1-0-6	1-1-0	1-1-0	1-1-0	0-15-6	1-5-6	1-0-6	1-3-2
Sardarnagar	B. & N. W. Ry.	1-1-0	1-1-0	1-0-6	1-0-6	1-0-6	0-13-8	1-3-8	1-1-0	1-2-8

Railway freight on Sugar in India, Approx. 1000 miles Re. 1-1-0 per maund (by C|J schedule). Steamer freight from Java to India about 0-4-0 per maund.

We trust that the railways will continue to view sympathetically as they have done in the past, the question of quotation of suitable flat rates for helping the Industry which, passing as it does through a critical time, needs such help all the more. We suggest that suitable adjustment in rates to all internal points in the length and breadth of India to enable sugar to move *freely* is a sound commercial proposition in the interests of the Industry and Railway revenues as a whole, and the Railways should assist the industry in this respect.

Railway Freight on Sugarcane.

The remarks that we have made with regard to freight on Sugar apply with equal force to freight on Sugarcane and Molasses too.

The East Indian Railway quotes lump-sum wagon rates for Sugarcane to benefit sugar factories at the rate of As. 0-14-0 per wagon mile on an assumed average lead of 400 miles. During the year under review the E. I. Railway extended their lump-sum wagon rates for Sugarcane to several junction stations such as *via* Naihati, *via* Mokamehghat, *via* Bhagalpur, *via* Arrah and *via* Sasaram for traffic to Sugar Mills on the adjoining Railways.

We consider that there is still scope for a further reduction in the Sugarcane rates by the Railway notifying the charge on the minimum permissible basis or even going lower where warranted, with the Government of India's sanction. The difference between the price of gate cane and railway cane is half an anna per maund and if the railways could see their way to reducing further their special rates of freight for cane transported from long distances, it will enable the factories to extend their crushing season and thus help not only long lead movements over railways, but also the trade generally.

Protection against damage of Sugar on Railways.

The experiment of protecting sugar consignments against damage by wet by ingress of rain water through the interstices on the top of the wagon doors by using gunny strips was continued on the East Indian Railway during the last monsoon season. In the year 1937, the experiment was conducted only with regard to traffic from *via* Mokamehghat to Kantapukur and Howrah, but in the year under

review, the experiment was conducted at the transshipment points at Mokamehghat, Barabanki, Allahabad City, Bareilly and Moradabad on wagons booked to stations on the E. I. and foreign Railways. The following statistics in regard to the experiment conducted in 1938 will be of interest:—

<i>Protected Wagons</i>			
Number of wagons	4,631
Number of bags loaded	5,33,765
Number of bags found damaged	31,748
Percentage of damage	6.0
<i>Unprotected Wagons.</i>			
Number of wagons	1,884
Number of bags loaded	1,73,956
Number of bags found damaged	16,073
Percentage of damage	9.2

Comparative statistics for the years 1936, 1937 and 1938 are given below:—

		1938	
	1936	1937	Unprotected Protected
Total number of bags loaded in wagons	97,747	1,24,631	1,73,956 5,33,765
No. of bags found			
· damaged at destination	12,282	8,183	16,073 31,748
Percentage of damage	12.6	6.6	9.2 6.0

NOTE—The figures of 1936 and 1937 are for the period of August and September only as the figures for other months were not available.

In 1936, there was no protection to wagons by the use of gunny strips, and in 1937, only a certain number of wagons were so protected as the arrangements were not complete.

The figures quoted above indicate that there was a considerable contraction in the percentage of damage by wet since 1936. There is, therefore, good reason for holding the view that experimental measures adopted by the East Indian Railway in protecting consignments of sugar from damage by wet at transshipment points by using gunny strips have been effective.

Railway Freight on Molasses

Complaints were received during the year that the Indian Molasses Company, was selling molasses, purchased by them from sugar

factories and transported over the railway system for the sole purpose of export, for which they get a specially reduced rate of freight, in the Indian market, and thus spoiling the Indian market.

Our investigations, however, show that the Indian Molasses Company sold in the Indian Market only such molasses for which they paid full freight, like other merchants. The special railway freight applies only to molasses which was brought for export purposes and no such molasses were sold in the Indian market.

Both the B. & N. W. Railway and the E. I. Railway quote specially reduced rates of freight on molasses from Howrah on the export traffic and for that purpose, the B. & N. W. Railway molasses are carried in tank wagons provided by the Indian Molasses Company.

Complaints re: shortage of wagons

Complaints are being received from factories pointing out that leaking wagons are supplied which damage the sugar. Cases of inadequate supply of empty wagons to sugar factories for despatch of sugar and sugarcane were also received. Complaints were also received regarding inadequate supply of tank wagons to the factories, as also of heavy freight charges for molasses on the N. W. Railway. The Railways should provide more tank wagons.

We hope that the Railways will give their close attention to these complaints with a view to remove them immediately and to co-operate with the Industry and render necessary help in its stabilisation on sound lines.

Treatment of Technical Staff and Minimum Wages to Labourers.

In our last annual we stated that the U. P. and Bihar Governments issued a circular in January 1938 requesting all factories to give effect to the recommendations of the Sugar Conference held at Patna in September, 1937 for fixation of wages of labourers employed in factories at not less than 0-5-0 a day. They also suggested that as far as possible the services of the Technical staff during the off-season should be retained by giving them half pay as was being done by some factories.

During the year 1938, the Governments of U. P. and Bihar on the recommendation of the Sugar Control Board appointed a Committee consisting of three representatives of the Sugar Mills and three representatives of the Agriculturists to enquire into labour conditions

in the sugar factories, etc. We have referred to the appointment of this Committee elsewhere. The Committee's report has not yet been published by the Governments of U. P. and Bihar. We feel however, that before the Governments decide to take any action in the matter, they should give their careful consideration to the report of this Committee and should bear in mind that the sugar industry is a seasonal industry, and that it is to meet competition from other Provinces, and Indian States etc., etc. We feel however that the sugar factories should look at the problem of the continuous employment of its technical staff with as great a liberal mindedness as possible, bearing in mind the economic condition of the industry. They should endeavour to give as far as possible off-seasonal allowances to their skilled labour in order to create a feeling of security amongst technical men and to enable them to contribute their best towards the development of the industry and promotion of its efficiency.

In this connection, the Tariff Board has also observed that labour conditions in factories are not altogether satisfactory, and has recommended that the scales of salaries and terms of employment should be improved. The Tariff Board has also observed that the extent of the welfare work depends upon the stability of the industry and unless the manufacturer feels that he can make a reasonable profit, he cannot afford to be liberal in his terms to his employees (*vide* Tariff Board's Report page 153).

Co-ordination of development of Industry.

The Sugar Control Board decided in one of its meetings to recommend to the U. P. Government the question of calling an all-India Conference for achieving a co-ordination of development of the Indian Sugar Industry. The National Planning Committee, under the Chairmanship of Pandit Jawaharlal Nehru, also passed the following Resolution at its Bombay meeting, in June 1939.

"This Committee is of the opinion that no new factory should be allowed to be established and no existing factory should be allowed to be extended or to change control without the previous permission in writing of the Provincial Government.

"In granting such permission the Provincial Government should take into consideration such factors as the desirability of the location of industries in a well distributed manner over the entire province, prevention of monopolies, discouragement of the establishment of uneconomic units, avoidance of overproduction and the general economic

interest of the province and the country. The various Provincial Governments should secure for themselves requisite powers for the purpose, if necessary, by undertaking suitable legislation."

The Sugar Committee of the Imperial Council of Agricultural Research at its meeting held in July, 1939, suggested that an All-India Sugar Conference should be convened to consider measures for rationalisation of the Industry under some form of State Control.

All-India Sugar Conference Postponed.

In August, 1939, the Government of India, had decided to convene an All-India Sugar Conference in December, 1939 to consider measures for rationalisation or stabilisation of the Industry but in the light of subsequent events brought about by the outbreak of the war, the Government of India decided in November, 1939, not to proceed with the proposal until the situation becomes clearer. The Government of India also considered it inopportune to convene an All-India Conference with the object of concerting measures for the stabilisation of the industry at a time when conditions in India and elsewhere were so unstable.

All-India Licensing of Sugar Factories, Central Marketing organisation and other proposals for consideration by the All-India Conference

The U. P. and Bihar Governments passed legislation preventing the construction of new factories and of extensions to existing ones without securing a license previously from the Government, in the year 1938. No such legislation has however, been undertaken in other Provinces. It is clear that this licensing scheme, if it is to be successful, should be extended to the other Provinces and States, as then alone, it would be possible to avoid over-production and to regulate the industry properly.

In this connection, the Indian Sugar Syndicate Limited suggested the following resolution emphasizing the necessity of an All-India Licensing of sugar factories for consideration at the proposed All-India Sugar Conference to be held in December, 1939, but which, as we have observed before, has been postponed *sine die*.

"In view of the fact that the existing factories in India are capable of producing a quantity of sugar adequate to meet the entire consumption of the country and that a check on indiscriminate expansion of the Industry is necessary and also taking into considera-

tion the fact that U. P. and Bihar are exporting outside provinces, 75 per cent of whose sugar find their consumption outside these two provinces, it be resolved that All-India legislation for licencing to regulate the erection of new factories as also the extensions of old ones be enacted by the Central Government as early as possible and a system of All-India licencing be introduced in the country for the general welfare of the Industry as a whole."

The industry also desires that there should be regulation of sugar production, of cane production and larger expenditure on Research work for development of cane of suitable quality. The industry has also recommended the establishment of industries subsidiary to sugar, and the passage of legislation for the manufacture of Power Alcohol from molasses and its compulsory admixture with petrol by the Governments of the various Provinces in India.

Central Marketing Organisation

The Indian Sugar Syndicate sent the following resolution urging legislation making it compulsory for *all* factories in the country to join the syndicate as members.

"That it be resolved that All-India legislation be adopted to make it compulsory for every sugar factory in India to join the Indian Sugar Syndicate Limited as Member. In view of the fact that the Syndicate has been functioning for the last three years as a Marketing Organisation for the factories in U. P. and Bihar, there is no need for any other organisation being set up for the purpose of either stabilising sugar prices or for the purpose of undertaking measures for economic marketing."

The Central Sugar Committee

The Government of India invited the views of the industry on the question of constitution, finance and functions of the proposed Central Sugar Committee in October, 1939. On behalf of the Industry, the Indian Sugar Mills Association observed that the proposed Central Sugar Committee should be established on the lines of the Indian Cotton Cess Act of 1923. The proposed body would thus be autonomous in character and not a body formed by Executive Order as the Indian Central Jute Committee. It should be vested with large powers and important functions in regard to the sugar industry. This

Committee should not depend, like the present Sugar Committee of the Imperial Council, upon recurring or non-recurring grants of the Government of India for carrying on its work. Its finances should be provided in the Act itself, but there should be no separate cess, as the industry is already heavily taxed. The Central Government should contribute annas two per cwt. of sugar assessed to Excise Duty for purposes of sugar research and development, and a provision should be made in the Act placing this amount at the disposal of the proposed Sugar Committee. The Sugar Committee should undertake Research Work of a comprehensive nature on the various problems pertaining to the sugar industry and should be a body comprising representatives of sugar manufacturers and cane growers from various Provinces of the country, and of the various Governments, Central and Provincial. In this connection, the Indian Sugar Syndicate expressed the following views for the consideration of the All-India Sugar conference:

"It is doubtful (a) if, under the Government of India Act, the Central Government have the power to legislate for a Central Sugar Committee inasmuch as agriculture and agricultural research are provincial subjects; and (b) whether the establishment of a Central Sugar Committee would be of any advantage either to manufacturers or to the cultivators. But if the formation of a Central Sugar Committee is resolved upon, then the following resolutions may be adopted:—

"That it be resolved that supervision over all research stations in India be entrusted to a statutory Central Sugar Committee constituted with 40 per cent of the seats reserved for the industry and allotted to the various provinces on sugar production basis."

"That the said Committee be financed entirely from the Central excise funds without levying any further tax on the industry which especially in U. P. and Bihar is over-burdened with a high price for cane, cess etc."

"That the function of the Committee be amplified so as to include effective control over all research stations although its functions may be confined to the research side of the industry only."

Expenditure on Research and Investigation benefits all

We have already referred to the paramount necessity of Research work and of spending liberally thereon for the improvement of culti-

vation, for increasing the efficiency of factories and for the utilisation of the by-products of the Industry in the best possible manner. Expenditure on Research work should not be considered as fruitless, and it should be treated as a profitable investment which will pay itself several times over, and the Government should earmark larger amount from its increasing excise revenue for this purpose in order to ensure the stabilisation of the industry, at an early date.

We have already shown in a table in the 'Sugar Industry at a Glance' how there has been an increase in the agricultural income from the improvement of sugarcane crop and how it has benefited the cultivators generally. The Imperial Council of Agricultural Research assessed the total increase due to the improvement of sugarcane crop, at $2\frac{1}{4}$ crores of rupees per annum.

A Press Note of the Bihar Government issued in July, 1939, stated that as a result of the measures taken for improvement of sugarcane cultivation, it is computed that the cane-growers realised approximately Rs. 2,45,37,250 during the 1938-39 cane crushing season. A larger amount still must have been realised by the cane-growers in the U. P.

Rs. 20 lakhs per annum on cane-research

We suggest that a sum of not less than Rs. 20 lacs should be spent annually on Research Work. We endorse the recommendation of the Tariff Board (page 143), that the allotment from the Excise Fund should be raised from one anna to three annas per cwt. We also endorse their recommendation "that the only hope of the Industry ever being able to compete on equal terms with other countries, is a reduction in the price of raw material (*vide* Page 143). The Tariff Board has also outlined various directions in regard to Research Work to be carried on for benefiting the industry.

Magnificent Development of the Industry.

The magnificent progress of the sugar industry can be a source of inspiration to other industries also and it is the duty of the Government of India to foster the spirit of industrialisation in the country by encouraging an industry like sugar, which has already made the country self-sufficient in the matter of an article of daily consumption within a brief period of six years and which has brought about amelioration to a large number of cultivators whose interests are indissolubly connected with the sugar industry. We strongly

feel that the Government of India should also place larger sums of money at the disposal of the Provincial Governments for making headway with the Provincial schemes. We would reiterate here that facilities should also be given for research work for improvement to the methods of manufacture of *gur* from cane and for encouragement of sugar from Palmyra, dates, cocoanut and other palms, as *Gur*-making is a very important village industry. As we have observed before, we feel strongly that the Government of India should give at least annas 3 per cwt. to the Provincial Governments for purposes of improvement of the cane-crop, out of the revenue derived from the excise duty amounting to over Rs. 4 crores.

Future of Industry Depends on Increasing Yield of Cane.

The future of the sugar industry, we are convinced, depends upon the vigour with which research work is carried on in its various complex problems—agricultural, chemical and technological. It is hardly necessary to re-iterate here that the possibility of export of sugar depends entirely on the success achieved in the direction of reduction of cost of production of cane by increasing the yield of cane crop per acre from 15 tons at present to at least 50 tons, and consequently a reduction in the cost of production of sugar (the cost of the raw material works out to about 55 per cent in the cost of manufacture of sugar) to a level which can compare with countries like Java, Cuba, Phillippines and Hawaii islands.

Subsidiary Industries like Confectionery, Syrups etc.

We feel that along with the utilisation of the by-products of the industry, efforts should also be made for the establishment of subsidiary industries like confectionery, syrups, fruit preservation etc. The import of confectionery alone in India during the year 1938-39 was valued at about 16 lakhs of rupees as compared with 18 lakhs in the year 1937-38 and that of canned or bottled fruits was valued at Rs. 10 lakhs in 1938-39 as compared with Rs. 12 lakhs in 1937-38. We feel that if suitable assistance is given, confectioneries like lozenges, sweets, toffees, etc., can be manufactured in large quantities in this country and a new industry can be established.*

*The South Bihar Sugar Mill of Bihar, the North Bengal Sugar Mill, and the Daurala Sugar Mill in U. P. we are glad to note, have commenced manufacture of confectionery since 1937-38. The South Bihar Mill is noted for its excellent toffees, jujubes, boiled goods and satins.

One method in which assistance can be given by the Government would be to exempt the sugar required for the manufacture of confectionery from excise duty. A market also exists in the country for Demerara sugar, sugar cubes etc. We hope that the possibility of the development of such industries will not be ignored.

Estimate of cost of manufacture of sugar in factories.

It is difficult to arrive at any absolute figure of the cost of production in India. The cost would vary with the percentage of recovery obtained and the number of days a factory works etc. We feel, however, that it would be safe for the purpose of computation of the cost of manufacture, to take the figures recommended by the Tariff Board after a very careful enquiry on page 81 of their Report. The Sugar Syndicate has also furnished some figures of cost to the Governments of U. P. and Bihar during the year 1939. According to their calculations, the average cost of manufacture in U. P. and Bihar factories worked out to Rs. 2-2-6 per maund, during 1938-39, as against the Government's calculation of only Rs. 1-10 per maund of sugar.

Bihar Labour Enquiry Committee.

During 1938 the Government of Bihar appointed a Labour Enquiry Committee for investigating the problems relating to industrial labour in Bihar, and for making such recommendations as may appear practicable for the purpose of improving the level of wages, conditions of work, employment etc. The Committee issued a special supplementary questionnaire for the Sugar Industry. It is expected that the Enquiry Committee will submit its report by February 1940. The *personnel* of the Committee is as follows:—

Dr. Rajendra Prasad, Chairman, Mr. R. R. Bakhale, Dy. Chairman, Mr. M. P. Gandhi, Prof. Abdul Bari, M.L.A., Babu Jagat Narain Lal, M.L.A., Dr. Radha Kamal Mukherji, Mr. H. B. Chandra, M.L.A., and Mr. R. K. Saran, (Secretary).

Standard Contract form for Sugar.

During 1939, the Indian Sugar Syndicate and the Indian Sugar Mills Association held several meetings to amend the standard Contract Form for the sale of Sugar, with a view to meet the objections of the merchants as far as possible. The new form has been finally settled and adopted by all factories.

Export of Sugar by Sea: Subsidy recommended

In our last Annual, we have stated the conditions under which India was committed not to export sugar from India by sea, except Burma for a period of five years by signing the International Agreement on 6th May, 1937. It was hardly possible for India to export sugar during the last three years, and there will be little possibility of export of sugar during the year 1939-40 in view of the shortage of production of sugar in India, but we feel that the ban should be lifted as early as possible and India should be free to export sugar if and when she finds it possible to do so. In view of the unsettled conditions due to the out-break of the war, the International Sugar Convention is not expected to remain in force, and if this contingency materialises, India should take the opportunity of getting out from the unfortunate position to which it has been committed, and to devise measures whereby she can export sugar to foreign countries, particularly to the United Kingdom where there are distinct possibilities. In this connection, the Tariff Board has also observed that when the restriction on export of sugar from India is removed, the matter should be fully investigated, and if it is found that the industry cannot manufacture raw sugar at a reasonable profit, some sort of subsidy should be given out of the receipt from the Sugar Excise Duty to encourage the production of raw sugar. (*Vide* Report, page 135). The Tariff Board has also observed that in this connection it is of interest to see the figures of production and consumption of sugar in the United Kingdom.

Sugar Production and Consumption in U. K.

The sugar consumption in U. K. approximately comes to 23,18,000 long tons annually. In 1938, the home grown sugar accounted for about 14 per cent and the balance has to be imported. During 1938, the importations totalled 24,17,000 long tons. Of this quantity 11,99,000 tons—a trifle less than half the total importations came from British sources, Australia, British West Indies, Mauritius and Union of South Africa. Cuba supplied 604,000 tons or about 25 per cent of the total, San Domingo supplied 273,000 tons or a little over 11 per cent and Java 145,000 tons or 6 per cent. The balance of 196,000 about 8 per cent was supplied by various other countries.

Beet sugar production in the United Kingdom for the season starting September 1, 1939 is estimated at 531,000 long tons, raw value

* *Vide* 1938 Annual, pp. 155-158. The Agreement was signed inspite of the Assembly's Resolution and vigorous protests from the industry.

as contrasted with 322,000 manufactured last season an increase of 209,000 tons or approximately 65 per cent. This season's estimate was based on conditions just prior to war hostilities in Europe. What effect the unsettled conditions may have on the final outturn is, of course, problematical. Harvesting of the sugar beet crop usually commences in September and is completed in January. In the past few seasons, 18 Beet sugar factories operated in producing the sugar crop. The United Kingdom ranks next to U. S. A. as the largest sugar importing country of the world. It also does large exporting business. During 1938, the import totalled 2,417,473 long tons raw value, and the exports amounted to 390,226 tons (*vide* Lamborn Sugar Market Report dated 26th September, 1939).

As will be seen from a table in the "Sugar Industry at a Glance," Colonial sugar enjoys a preference in the U. K. market, and if Indian sugar gets a preference it should be possible for her to send her surplus sugar to the United Kingdom, which should be pleased at the prospect of getting sugar from India, an Empire country, in as much as she will be independent of other countries for supplying her requirements of sugar.

No export possible, with high cane prices.

It is certain however that as long as the price of cane remains at the present high level, it would not be possible to think of export. The cost of cultivation must necessarily be reduced by an increase in the yield and the sucrose content of the cane. Then alone there will be a possibility of an export market for Indian sugar. We invite the earnest attention of the Governments of U. P. and Bihar and also the Government of India to this matter.

Java's Increased Manufacture and Export of Sugar.

We might now refer to the general conditions of the sugar industry in Java, as it will have a very important bearing on the sugar industry in India. As many as 81 sugar factories worked in Java during the year 1937 as against 85,076 acres in 1936. The total amount of cane harvested was 11,915,314 tons as against 46,40,856 tons in the previous year. The average yield of cane amounted to 56.24 tons per acre.* The highest figure reported for any crop was 62.33 tons per acre, while the lowest reported was 55.22 tons. The sugar content of cane was lower than in 1936. The average percentage extraction was 11.40

*The average yield of cane in India is grievously low, being only about 16 tons per acre.

in 1937 as against 11.72 in 1938. The highest recovery during 1937 for any crop was 12.14 per cent while the lowest was 10.51 per cent. The final figure of production in Java in 1937 was 14,14,500 tons. It is clear that the number of factories as well as the acreage under cane has been falling steadily in Java from 1927. As compared with 178 factories and 455,806 acres under cane in 1927, there were only 35 factories with an acreage of only 85,076 in 1936. In 1937 as we have observed before, 81 factories were working with an acreage of 211,788 under cane. The balance of the supply in Java on 1st April, 1938 was 325,897 tons. The final figure of production of sugar in Java for 1938-39 is reported to be 15,50,000 tons as compared with 13,94,945 tons in 1937-38 and 14,14,500 tons in 1936-37.†

Main Features of the Industry in Bombay and Madras.

In the preceding pages, we have dealt with the Indian Industry as chiefly concentrated in U. P. and Bihar which produce about 82 per cent of the total sugar manufactured in the country. In view of the growing importance of the industry in Bombay and Madras, we are giving the main features of the industry in those Provinces also.

Main features of the industry Bombay in 1938-39

The majority of the factories in Bombay grow nearly all their cane. Only just recently, the Government has allowed two crops in 5 years, but it has now been altered to 3 crops in 5 years, which is of considerable assistance, as in cases where factories have increased their crushing capacity, it has meant a lessening in the leasing of land.

All the indigenous variety of cane such as Pundia have disappeared, and these have been replaced by special tropical canes such as POJ. 2878, EK. 28, CO. 290, the latest variety being CO. 490.

Selected plots which have been given special treatment as regards fertilisers are reported to have given a yield up to 100 tons per acre, but this does not appear to be a commercial proposition, and the average yield with the normal use of fertilisers may be taken as being 40 to 45 tons per acre. Ratoon crop of which only one is taken, give yields of about 30 tons per acre. The fertilisers mostly are oilcake and sulphate of ammonia.

The crushing season in Bombay may be taken to commence early in October and end early in May. It is common however, for one or

†Vide "Review of the Sugar Industry of India," by the Director, Imperial Institute, in the Trade Journal dated 2nd November, 1939.

two factories to extend their crushing period well in to the second half of May, but thereafter the cane from the sucrose point of view deteriorates rapidly. The quantity of molasses produced in Bombay factories is about five lac maunds. Some of the factories have been able to sell their stocks to Government Distillery, some molasses is burnt in boilers and some are pumped on to cane fields. A small quantity is being used for road making.

According to an interesting note furnished by Mr. V. V. Gadgil, the Principal Agricultural Officer, Sugarcane Research Scheme, Padegaon, there has been a considerable improvement in the yield of cane in the Bombay Presidency. Yields of about 50 tons of cane per acre were found in the Ravalgaon and Kalamb sugar factories. The Padegaon Research Station continues to make investigations for the improvement of the quality of the cane by suitable manuring, by investigation into the behaviour of the soil used for cane growing etc., into the proper use of irrigation water at different changes, of the growth of the crop etc.

The production of sugar in Bombay, excluding the Indian states, was 52,300 tons in 1938-39.

Main features of the Industry South of Hyderabad State in 1938-39

Due to satisfactory weather conditions the cane crop throughout the South of the Peninsula was the best experienced for many years past and higher yields per cane were also reported. The crops were free from pests and infectious diseases. The Madras Government declared the area as a controlled area and fixed the minimum price of cane at Rs. 9-8-0 per ton in 1938-39. They have also announced their intention to include the whole of Vizagapatam District as a controlled area with effect from the 15th September, 1939.

In order to avoid unnecessary competition and to regulate selling prices, the Indian Southern Provinces Sugar Marketing Board was formed at the end of 1937. Eight factories including all the larger ones south of Hyderabad are already members of the Board. The Board has successfully arranged sales of its members' sugars in the most advantageous markets at the best prices. The financial results of most factories were satisfactory.

The Madras Government appointed a Committee in 1937 to enquire into the question of Power Alcohol in the Presidency. This Committee is understood to have recommended that the manufacture

of Power Alcohol should be undertaken. We have already referred to this elsewhere.

The production of Sugar in Madras increased to 23,000 tons in 1938-39. This does not include the production of Mysore State. Altogether, the production in the Madras Presidency was about 33,000 tons in 1938-39.

Bihar permits deduction in price for inferior cane, like U. P.

We are glad to note that as a result of the representations made by the Indian Sugar Syndicate Limited, to the Government of Bihar during October and November, 1939, the Bihar Government agreed in December 1939, to consider the question of permitting deductions* from the price of cane fixed by them in any tract declared by them as tract:—

- (1) in which cane is definitely below the average of standard cane for the area on account of natural causes, i.e., serious water-logging, intensive insect attack, diseases or severe frost;
- (2) in which a specified inferior variety of cane is ordinarily or preponderatingly grown, or
- (3) in which owing to inaccessibility of other special causes the circumstances are such that a deduction from the minimum price would be in the interest of the growers.

The Bihar Government permitted a deduction of 0.0-6 per maund of cane in some tracts in 1939-40.

Fixation of maximum prices of sugar in various Provinces in 1939-40

As a result of the outbreak of the war, the various Provincial Governments including U. P. and Bihar have been considering the question of controlling the prices of various foodstuffs, including

*Rule 31 of the Bihar Sugar Factories Control Rules has been amended as above, and as a consequence of the above amendment, deductions are also permitted for repayment of any advance made, in cash or kind, provided however that in such deductions, interest charged on the advance shall not exceed 6 per cent per annum, and the advance together with the interest due thereon is to be deducted in not less than three equal instalments spread over the period of the supply of cane during one or more crushing seasons.

The United Provinces Government permitted such deductions in 1937-38, in some tracts in West U. P., when the cane was inferior, and also in 1939-40, in some tracts, amounting to 0.0-9 per maund of cane.

sugar. The Bengal Government fixed the maximum price of sugar at Rs. 13-12-0 in Calcutta, during December 1939.

The Government of Madras have, however, decided that it would be inadvisable to control the price of sugar in the Madras Presidency as such control would involve joint action with the Government of India and the Governments of U. P. and Bihar, particularly, as the latter Provinces fix from time to time the price to be paid to the grower for cane, and the price of sugar in the Madras Presidency which produces only 33,000 tons out of the estimated consumption of 100,000 tons is dependent upon the sugar produced in U. P. and Bihar which produce 85 per cent of the total sugar in the country.

In a Press Note issued by the Madras Government in December, 1939, they state however that they will not hesitate to initiate joint action if circumstances demand it, but for the present, they see no necessity to do so.

International Sugar Agreement and Export Quotas.

The International Sugar Agreement was signed in May, 1937, by representatives of Governments of 21 major sugar producing countries of the world, including India. The head-quarters of the International Sugar Council is at London. This Council determines from time to time the export quotas for the various countries in relation to the free market requirements. The basic export quota for the various exporting countries for the year commencing from 1st September 1937 to August 31, 1938, was fixed at 36,11,000 metric tons. During the year 1938-39, the export quota was reduced by about 5 per cent under Article 21(A) of the Agreement, and there was a further additional surrender under Article 24(c) of the Agreement. During 1938-39, a further allotment was made, when the total free market requirements were estimated at 34,80,277 tons. Due to this, the quotas for several countries were reduced. The machinery of the International Sugar Agreement has been put out of gear due to the outbreak of the war, and it remains to be seen how far the various countries will be under an obligation to adhere to these quotas etc.

World Production and Consumption of Sugar

We give below statistics of production and consumption of sugar in different countries of the world during the year 1938-39.

TABLE NO

*World's Production and Consumption of Sugar in Long Tons
for the year 1938-39**

	Production	Consumption
Total World (long tons, raw)	29,642,000	29,323,000
<i>North America.</i>		
United States	2,097,000	5,965,000
Total North America	8,065,000	7,178,000
Total South America	2,248,000	1,875,000
<i>Europe.</i>		
Germany	2,114,000	2,054,000
France	876,000	1,035,000
Russia	2,260,000	2,280,000
United Kingdom	414,000	2,340,000
Total Europe	8,669,000	11,499,000
<i>Asia.</i>		
China	410,000	660,000
India**	4,090,000	4,200,000
Papanese Empire	1,550,000	1,190,000
Java	1,500,000	325,000
Philippines	974,000	77,000
Total Asia	8,548,000	7,372,000
Total Africa	1,186,000	924,000
Total Australia	790,000	358,000
Grand Total	29,642,000	29,323,000

*Of the total world production of sugar viz., 29,643,000 tons in 1938-39 about 18,000,000 tons represents production of cane sugar and 11,000,000 tons represents the production of beet sugar.

It will also be seen from the above table that while the consumption of sugar in Europe is 11,499,000 tons, it produces only 8,669,000 tons.

**It will be noted from the above table that India ranks as the largest sugar producing country in the world with about 14 per cent. of the total world production to her credit. It is a matter of gratification to find that India which was the birth place of sugar (as also of the textile industry) has continued to lead in the matter of production of sugar. This figure includes not only the manufacture of white sugar but also Gur or raw sugar produced in India.

The world production, consumption and carryover of stocks for the last 8 years is given in a Table in "The Sugar Industry at a Glance." Vide Lamborn's sugar statistical bulletin, 25th February, 1939.

Outlook for the Sugar Industry for 1939-40

In the previous pages, we have referred in great detail to the various problems now facing the industry. We may now turn our attention to the future course of the Industry during 1939-40. As we have seen, the production of sugar in the country during 1938-39 was considerably smaller than the previous season due to smaller cane crop, shorter crushing season, diseased cane, lower recovery etc. During 1939-40, we expect the production of sugar to be about 2 lacs tons higher than in 1938-39, but we reckon that the total production will still be smaller than the estimated consumption of sugar in the country. This will necessitate the import of sugar from other countries, like Java, to the extent of about 1 lac tons during 1939-40. We consider this to be a very unfortunate position. It is due, however, in a great measure to natural causes like the shortage of cane crop, prevalence of disease etc. We feel that the problem of regulation of cane supplies is a very important one and should receive very close consideration. In order to avoid any deficit in India's production of sugar, the industry should so regulate the production of cane that normally there should be a surplus of about 2 lacs tons of sugar which should be carried over to the next season. If this is arranged, it would also be possible to prevent wide fluctuations in the price of sugar, and the country can be assured of a steady and stable supply of sugar from year to year.

Is further Tariff Board Enquiry necessary in 1940?

The present protection to the sugar industry will continue till 31st March, 1940, and the Government have announced their decision to conduct a further enquiry into the industry before determining the extent of protection to be granted to the industry up to 31st March, 1946. We feel, however, that as a result of the outbreak of the war in Europe, conditions in the industry are definitely abnormal and no advantage will be gained by the conduct of a further enquiry into the Industry for the purpose of determining the extent of the protection required under such abnormal and uncertain conditions. It will also divert the attention of the industry to the question of the preparation of a case for the enquiry, which it will hardly be worth-while to undertake. We, therefore, strongly recommend that the Government of India should continue the measure of protection at present subsisting for the industry upto the 31st March, 1946, and thus relieve the industry of the great suspense into which it is put, as a result of the grant of temporary protection upto 31st March, 1941 only. The industry should be assured of its position, at least for 5 years ahead.

Assistance to industry by Provincial and Central Governments necessary.

We would also reiterate here that the most important problem now before the industry is that of improvement of cultivation of cane and of reduction of the cost of production of cane as upon that alone will depend the future stability of the industry in the country. We trust that the Government of India will give their fullest consideration to the observations made in this behalf by the Tariff Board who have recommended that larger grant should be made by the Government for purposes of research work into the question of the improvement of cultivation of cane, with a view to improve the yield of cane per acre, the quality of the cane as also the sucrose contents, etc.

The Industry deserves the fullest support from the various Provincial Governments also in regard to this matter. With a larger revenue accruing to the Government of India from the yield of the Excise Duty on Indian sugar amounting to about $4\frac{1}{2}$ crores of rupees per year, and with the additional revenue accruing to the Provincial Governments of U. P. and Bihar from the levy of the cess of canes consumed by factories at the rate of 0.0.6 per md., it should be possible for them to earmark larger amounts of money for being spent on objects which would lead to the development of the sugar industry on sound and scientific lines.

As in the case of cultivators whose interests have been fully safeguarded by the Provincial Governments of U. P. and Bihar, by fixing prices of cane calculated to give a handsome profit, the industry also needs a measure of sympathy from the Provincial Governments, and it should be allowed to make fair profits like the various other industries of the country. The bulk of capital invested in the industry is indigenous and it naturally expects a reasonable profit on the investment.

Assistance to Industry by Governments and Legislatures.

We hope that the Government of U. P. and Bihar which have taken such a keen interest in the promotion and development of this industry and have saved it from the impending catastrophe in the 1937 season by passing the Sugar Factories Control Act, will continue to do so, and will also bring pressure on the Government of India to do all that is essential for the reduction of the cost of production of cane and also of sugar, for utilisation of by-products like molasses and bagasse, for spending liberally on Research Work, for regulating on an All-

India basis the further expansion of the industry in a manner which would avoid over-production of sugar which would be harmful to all interests concerned, and for developing a suitable Central Marketing Organisation comprising all sugar factories in the country with a view to prevent avoidable competition amongst the factories and to ensure a steady supply of sugar in an economical manner at the cheapest rate in order to safeguard the interests of the consumers and incidentally to encourage the consumption of sugar, which is remarkably low at present, by the people of the country, and generally to create congenial conditions for the consolidation of the industry on the lines indicated in the above pages, in order that the industry may be able to do with the minimum of protective tariff, within a short time.

We also trust that the members of the Central Legislatures will take an interest in devising measures for the proper development and regulation of this great National Industry, particularly, when the question of the grant of further protection to the Industry comes up for discussion during the 1940-41 sessions of the Legislature.

Indian Sugar Industry's magnificent Progress.

Since the grant of protection to it, in April 1932, the sugar industry* has made a magnificent progress which is a matter of pride to the country, and it is the duty of the Governments, Central as well as Provincial, to devise such measures as will pave the way for the stabilisation of this second largest national industry of India, with which the interests of not less than 20 million cultivators are intimately connected, which finds employment for about 2,500 University Graduates, 100,000 unskilled labour, which has prevented the annual drain of about Rs. 1,60,00,000 for the import of sugar, which has been responsible for the development of the village industry of Gur manufacture, and which represents an investment of national capital estimated at about at Rs. 3,00,000,000. The safety and progress of such an important national industry must receive the sympathetic attention of everyone having the welfare of the country at heart.

*In Appendix I, we have given a complete list of sugar factories in India, working as well as projected with full names and addresses of Managing Agents, details as to their capacity, nearest Railway Station etc.

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APPENDIX 1.

(The Indian Sugar Industry—1939 Annual)



LIST OF SUGAR MILLS IN INDIA & BURMA
WORKING AND PROJECTED
(Season 1938-39)

DETAILED LIST OF SUGAR MILLS (VACUUM PAN) IN INDIA (1938-39).

(Including Gur Refineries)

EXPLANATION :—

Mills marked with an asterisk () are members of the Indian Sugar Mills Association. Asterisk in the last but one column denotes mills which have also got Gur-refining plants.*

† Mills marked thus did not work this season.

‡ " " " are reported to be under construction.

"S"—Sulphitation.

"DS"—Double Sulphitation†

"C"—Carbonatation.

"DC"—Double Carbonatation.

Name of factory, with full name and address of Managing Agents or Proprietors.

Location. District. Nearest Railway Station.

Nearest Steamer Station.

Daily cane-crushing capacity in tons.

BENGAL.

1. *North Bengal Sugar Mills Co., Ltd.,
M/A. Soorajmull Nagarmull,
6i, Harrison Road, Calcutta,
(Tel. Sugar, Calcutta).
Gopalpur.
(Tel. Sugar—
Gopalpur).
Rajshahi. Gopalpur, E.B.R. Saraghat. 1000* DS
2. *Setabganj Sugar Mills, Ltd.,
M/A. Soorajmull Nagarmull,
6i, Harrison Road, Calcutta,
(Tel. Sugar, Calcutta).
Setabganj,
(Tel. Sugar—
Setabganj,
E. B. Ry.)
Dinajpur. Setabganj, Do. Manihari. 500/550* DS
3. *Sree Radha Krishna Sugar Mills, Ltd.,
M/A. Jhajarharia Brothers, Ltd.,
138, Harrison Road, Calcutta,
(Tel. Sugarsweet, Calcutta).
Beldanga,
(Tel. Sugarsweet
—Beldanga).
Murshidabad. Beldanga, Do. Lalgola, E.B.R. 550 DS

(2)

4.	*The Ramnugger Cane & Sugar Co., Ltd. M/A. Anderson Wright & Co., 22, Strand Road, Calcutta.	Plassey P. O.	Nadia.	Plassey	Do.	Do.	500/600	DS
5.	Darsana Sugar Factory & Distilleries, M/A. M'S. Lyall Marshall & Co. 4, Fairlie Place Calcutta.	Darsana.	Nadia.	Darsana,	Do.		1000	S.
6.	The Deshabandhu Sugar Mills, Ltd. M/A. The Industrial Agency, 58, Patuataly, Dacca. (Tel. Deshabandhu, Dacca)	Charsindur.	Dacca.	Ghorashal (Flag) A. B. R.	Sultanpurghat.		250	DS
7.	†The East Bengal Sugar Mills, Ltd., M/A. Messrs. Business Magnets Ltd. 30/31/32 North Brook Hall Road, Dacca,	Shome (Kaliganj) (Tel. Arikhola, A. B. Ry, Dacca.)	Do.	Arikhola	Do.	Ronaldshay ghat	150	
8.	†Shikarpur Sugar Mills. M/P. Raja P. D. Raikut, M.L.A. (Bakunthapur Raj) Jalpaiguri. (Tel. office Jalpaiguri).	Shikarpur, P. O. Belacoba.	Jalpaiguri	Belacoba, E. B. R.	Dhubri.		150	
9.	+Dayamoyee Javanti Sugar Mills, Ltd. M/A. Advancement of Industries (Bengal) Ltd., H. O. Mymensingh (Tel. Dayamoyee Sugar Mills Ltd., Mymensingh.)	P. O. Kishoreganj, (Tel. Dayamoyee Sugar Mills, Ltd. Kishoreganj.)	Mymensingh.	Kishoreganj, A. B. R.			300	

Name of factory, with full name and address of Managing Agents or Proprietors.

Daily cane-crushing capacity in tons.

Nearest Railway Station.

District.

Location.

10. *Tata Sugar Mills, Ltd.
M/A The Bengal Development Co., Ltd.,
29, Strand Road, Calcutta.

Rungpur. Mahimaganj E.R.Ry.

Bagda,
P. O. Govindaganj.

BIHAR

1. *Sakri Sugar Works of
The Darbhanga Sugar Co. Ltd.
M. A. Octavius Steel & Co. Ltd.,
14, Old Court House Street Cal.
(Tel. Lapizando, Calcutta.)

Darbhanga. Sakri, B. N. W. R. Semaria Ghat. 700

(4)

S

2. *Lohat Sugar Factory of the
Darbhanga Sugar Co. Ltd.,
M/A Octavius Steel & Co. Ltd.,
14, Old Court House Street, Cal.
(Tel. Lapizando, Calcutta.)

Lohat. Do. Pandaul, Do. Do. 1300

S

3. *Ryan Sugar Co. Ltd.,
M. A. Begg, Sutherland & Co. Ltd.,
P. B. 21, Cawnpore,
(Tel. Begg Cawnpore.)

Ryan Factory P.O. Do. Tarsarai, Do. Do. 778

C

4. *Samastipur Central Sugar Co. Ltd.,
M. A. Begg, Sutherland & Co. Ltd.,
P. B. 21, Cawnpore,
(Tel. Begg Cawnpore.)

Samastipur Do. Samastipur, Do. Do. 700

S

5. †Dalsinghsarai Sugar Works, Ltd., M/A. Behar Trading Corporation, Samastipur	Ujiarpur.	Do.	Ujiarpur,	Do.	300	
6. *New India Sugar Mills, Ltd., M/A. Birla Brothers Ltd., 8, Royal Exchange Place, Calcutta, (Tel. Lucky, Calcutta.)	Hassanpur Rd. P. O. Hassanpur Sugar Mills, (Tel. "Birla") Hassanpur Sugar Mills, Darbhanga.)	Do.	Hassanpur Do. Road	Semaria Ghat Monghyr Ghat and Khagaria Ghat.	1000	DS
7. *Semapur Sugar Works of the Purnea Sugar Co. Ltd., M/A. Octavius Steel & Co. Ltd., 14, Old Court House Street, Calcutta, (Tel. Lapizando, Calcutta.)	Semapur.	Purnea.	Semapur	Manihari.	700	C
8. †Matangini Sugar & Dal Mill, Prop. Dinesh Chandra Roy, Zeminder	P. O. Hem-kunja	Do.				
9. *Japaha Sugar Factory, M P. S. & G. Richardson and others Muzaffarpur. (Tel. Richardson, Muzaffarpur.)	Japaha, Bhucanpore Factory P. O.	Muzaffarpur.	Muzaffarpur. Do.	Paleza	500	S
10. *Motipur Sugar Factory, Ltd., M. D. Sir Haji Abdoola Haroon M.L.A., Napier Road, Karachi, (Tel. Shadman—Karachi.) Seth Haji Abdul Rahim Oosman, Rajmohan Street, Calcutta, (Tel. Muslim—Calcutta.)	Motipur. (Tel. Sattar Motipur Muzaffarpur.)	Do	Motipur.	Do.	1000/1300	DC
11. *Belsund Sugar Co., Ltd., M/A. James Finlay & Co., Ltd., 1, Clive Street, Calcutta, (Tel. Mercator, Calcutta.)	Righa P. O. (Tel. Mitha, Righa.)	Do.	Riga,	Semaria.	850	DS

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	District.	Nearest Railway Station.	Nearest Steamer Station.	Daily Cane-crushing capacity in tons.
12. *Champaran Sugar Co., Ltd. Barrah Factory M/A. Begg, Sutherland & Co., Ltd., P. B. 21, Cawnpore. (Tel. Begg, Cawnpore.)	Bara-Chakia P. O. (Tel. Cane Bara-Chakia.)	Champaran.	Chakia,	Paleza.	900 C
13. *Shree Hanuman Sugar Mills, Ltd., M/A. Daulatram Rawatmal, 178, Harrison Road, Calcutta, (Tel. Gullaseed—Calcutta)	Motihari. (Tel. Sugar- Motihari)	Do.	Motihari,	Do.	600* DS
14. *The Sugauli Sugar Works, Ltd., M/D. Md. Hanif & Amjadali, 3, Rajmohan Street, Calcutta.	Sugauli.	Do.	Sugauli, B.N.W.R.	Paleza.	900 DS
15. *Motilal Padampat Sugar Mills Co., Ltd., H. O. Cawnpore. (Tel. Motipat, Cawnpore)	Majhulia. (Tel. Motipat, Majhulia, Champaran.)	Do.	Majhowlia,	Do.	1000 S
16. *Champaran Sugar Co., Ltd., Champatia Factory M/A. Begg, Sutherland & Co., Ltd., P. B. 21, Cawnpore, (Tel. Begg—Cawnpore.)	Chanpatia, (Tel. Chansuco Chanpatia.)	Do.	Chanpatia,	Do.	900 S
17. *Pursa Sugar Factory, M/A. Pursa Limited, P. O. Lauriya, Champaran, (Tel. Fuzze, Lauriya.) Pursa.	Pakri Lauriya, P. O.	Do.	Do.	Do.	500/600 DS

18.	*New Swadeshi Sugar Mills, Ltd., M/A. Birla Brothers, Ltd., Oriental Building, Esplanade Road, Fort, Bombay. (Tel. Lucky, Bombay.)	Narkatiaganj. (Tel. Birla Narkatiaganj.)	Do.	Narkatiaganj.	Do.	900	DS
19.	*Harinagar Sugar Mills, Ltd., M/A. Narayanlal Bansilal, 207, Kalbadevi Road, Bombay,	Ramnagar. (Tel. Maryada- Ramnagar Champaran.)	Do.	Harinagar,	Do.	1400/1500	DS
20.	*Ganga Devi Sugar Mills Ltd. M/A. Marwari Brothers Naraipore, Bagaha P.O. (Tel. Ganga, Bagaha).	Bagaha P. O.	Do.	Bagaha,	Do.	450/650	DS
21.	*Gaya Sugar Mills, Ltd., Managing Director, Mr. Gurn Sharan Lal	Guraru. P. O. Guraru- mills. (Tel. Sugar- mills.)	Gaya	Guraru,	E.I.R.	750/850	DS
22.	†The Patna Sugar Mills, Ltd., M/A. Amirchandra & Co., Arrah	Khagaul.	Patna.	Dinapore,	Do.		
23.	*The South Bihar Sugar Mills, Ltd., M/A. Nirmai Kumar Jain & Co., Devashram, Arrah. (Tel. Jineshwar Arrah.)	Bihta. (Tel. Sugar Bihta.)	Do.	Bihta,	Do.	1200	DS
24.	*Dumraon Raj Sugar Factory, Prop.—Maharaja Bahadur Dumraon Raj, P. O. Dumraon, Dist. Shahabad Now under :—Lessee, Ram Prasad Gupta, Zamindar & Banker, Arrah.	Bikramganj. P. O. Bikram- ganj.	Shahabad.	Bikramganj, A.S.L.R.	Sinha.	550	DS

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	District	Nearest Railway Station.	Nearest Steamar Station.	Daily cane crushing capa city in tons.
25. *Rohtas Industries Ltd., M/A. Dalmia Sabharwal Jain & Co., P.O. Dalmianagar (Shahabad). (Tel. Sugar, P.O. Dalmianagar.)	P. O. Dalmianagar. Rly. Station Dehri-on-Sone.	Shahabad.	Dehri-on-Sone, E.I.R.	Buxar.	1800 DC
26. *Ganga Deshi Sugar Factory, Ltd. M/D. B. Behari Lal, Buxar. (Tel. Sugar—Buxar.)	Buxar. P. O. Buxar- Gajadharganj.	Do.	Buxar. Do.	Do.	100*
27. *Sitalpore Sugar Works, Ltd., M/D. Ghosh & Dutt, 93, Dharamtolla Street, Calcutta and Indian Press Buildings, Allahabad. (Local office: Sahibgani, Chapra.)	Sitalpore, (Tel. Kamala Sitalpore, B.N.W.R.)	Saran.	Sitalpore, B.N.W.R.	Baghi.	800 DS
28. *Cawnpore Sugar Works Ltd., Marhowrah Factory M/A. Begg. Sutherland & Co., Ltd., P. B. 21, Cawnpore. (Tel. Begg, Cawnpore.)	Marhowrah, (Tel. Marsuo. Marhowrah)	Do.	Marhowrah, B.N.W.R.	Marhowrah.	900 DC
29. †Maharajganj Sugar Factory, Lessees: Bhargava Bros. & Co., Maharajganj.	Maharajganj.	Do.	Maharajganj, Do.	Revelganj.	150*
30. *The Behar Sugar Works, of the Industrial Corporation Ltd., M/A. Bakubhai Ambalal & Co., P. B. 28, Ahmedabad. (Tel. Molas—Ahmedabad). H. O. 27, Bastion Road, Fort, Bombay. (Tel. Indus—Bombay).	Pachrukhi (Tel. Indus- Pachrukhi)	Do.	Pachrukhi, Do.	Palezaghat.	1100 DC

31. *New Savan Sugar & Gur Refining Co., Ltd., M/A. Andrew Yule & Co., Ltd., 8, Clive Row, Calcutta, (Tel. Yuletide—Calcutta).	Siwan, (Tel. Sugar Siwan).	Do.	Savan,	Do.	Savan O.A.	800	s
32. *Indian Sugar Works, M/P. Mouvi Mohd. Abdul Razzaque, P.O. Siwan, Dist. Saran. (Tel. Indian—Siwan).	Siwan.	Do.	Do.	Do.	Do.	700	s
33. Siwan Deshi Sugar Factory, Prop. Messrs. Noori Mian & Co. Bhatni (Gorakhpur).	Do.	Do.	Do.	Do.	Do.	Gur only.	
34. *Bharat Sugar Mills Ltd., M/A. Birla Bros., Ltd., 8, Royal Exchange Place, Calcutta, (Tel. Lucky—Calcutta).	Sidhwalia, (Tel. Birla— Sidhwalia.)	Do.	Sidhwalia,	Do.	Revelganj.	600	DS
35. *Sasa Musa Sugar Works, Ltd., M/A. Mousell & Co., Ltd. P.B. 2164, Calcutta, (Tel. Diogenes—Calcutta).	Sasa Musa (Tel. Factory— Sasa Musa).	Do.	Sasa Musa	Do.	Palezaghat.	600	DS
36. *The Vishnu Sugar Mills, Ltd. M/A. Bilasrai Banarsilal & Co., Agakhan Building, Dalal Street Fort, Bombay. (Tel. Brijbilas—Bombay).	Gopalganj (Tel. Vishnu— Gopalganj).	Do.	Harkhua,	Do.	Revelganj	800	s
37. *S. K. G. Sugar Ltd., M/A. Dalmia Jan & Co. Ltd., P. O. Dalmianagar, Dist. Shahabad. (Tel. Sugar—P.O. Dalmianagar).	Hathua, P.O. Mirganj, (Tel. Krishna— Mirganj, & Chupra)	Do.	Hathua,	Do.	Palezaghat and Semariaghat.	1400/1500 DS	

UNITED PROVINCES.

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	District.	Nearest Railway Station.	Nearest Steamer Station.	Daily cane-crushing capacity in tons.
1. *Purabpore Co., Ltd. M/A. Begg, Sutherland & Co., Ltd., P. B. 21, Cawnpore, (Tel. Begg—Cawnpore).	Mairwa, (Tel. Sacrose— Mairwa).	Gorakhpur.	Mairwa, B.N.W.R.	Revelganj.	740 DC
2. *Noori Sugar Works. Prop. Noori Mian & Co. Bhatni. (Tel. Noori—Bhatni).	Bhatni.	Do.	Bhatni,	Do. Barhaj.	700 DS
3. *Shree Sitaram Sugar Co., Ltd., M/A. Karamchand Thapar & Bros., Ltd. 5, Royal Exchange Place, Calcutta, (Tel. Spiritual—Calcutta).	Baitalpur, P.O. Deoria, (Tel. Spiritual— Baitalpur, B.N.W)	Do.	Baitalpur,	Do. Barhaj	800 DS
4. *Cawnpore Sugar Works, Ltd. Gauri Factory, M/A. Begg, Sutherland & Co., Ltd., P. B. 21, Cawnpore, (Tel. Begg—Cawnpore)	Gauribazar, P.O. (Tel. Gaursuco Gauribazar.)	Do.	Gauri Bazar.	Do. (30 miles.)	700/800 DS
5. *Deoria Sugar Mills Ltd., M/A Karamchand Thapar & Bros., Ltd., 5, Royal Exchange place, Calcutta. (Tel. Spiritual—Calcutta.)	Deoria. (Tel. Spiritual— Deoria.)	Do.	Tahsil Deoria, Do.	Barhaj	900 DS

6. The Mahaswastika Sugar & Industrial Corpn. Ltd., M/A Badridass Satyanarain & Co., Deoria. (Tel. Swastika Deoria)	Deoria.	Do.	Do.	Do.	Do.	300	DS
7. *Saraya Sugar Factory, Senior M/Partner; S. B. Dr. Sir Sundar Singh Majithia. Sardarnagar. (Tel. Majithias—Sardarnagar.)	Sardarnagar.	Do.	Sardarnagar, Do.	Do.	Do.	2000	DS
8. *Diamond Sugar Mills, Ltd. M/A. Murarka & Sons, Ltd. 10, Clive Row, Calcutta. (Tel. Canesugar—Calcutta.)	Pipraich. (Tel. Diamond—Pipraich) (B. N. W.)	Do.	Pipraich, Do.	Do.	Do.	700/800	DS
9. *Pipraich Sugar Mills, Ltd., M/A. Mr. Mohammad Ashfaq, B.A., General Manager. (Tel. General Manger—Pipraich Mills.)	Pipraich (Tel. Pipraich Mill—Pipraich.)	Do.	Do.	Do.	Do.	300	S
10. *The Shankar Sugar Mills, Ltd., M/A. Inderchand Hariram. Captainganj.	Captainganj. (Tel. Shankarji, Captainganj)	Do.	Captainganj, Do.	Do.	Do.	800	S
11. *The Punjab Sugar Mills, Co., Ltd., Managers, Messrs. Narang Bros. & Co., Ltd., 3, Montgomery Road, Lahore. (Tel. Narang—Lahore.)	Ghughli, (Tel. Factory-Ghughli.)	Do.	Ghughli, Do.	Do.	Do.	800/850	DS
12. *Mahabir Sugar Mills, Ltd., M/A. Dwardkadas Bajnath, Siswa Bazar.	Siswa Bazar, (Tel. Mahabirji—Siswa Bazar.)	Do.	Siswa Bazar, Do.	Do.	Do.	500	DS
13. *The Vishnu Pratap Sugar Works, Ltd., M/D. R. K. Krishna Pratap Narain Singh and Kr. Ravi Pratap Narain Singh of Padrauna. (Tel. Sugar, Rajabazar Khadda.)	Khadda.	Do.	Khadda, Do.	Do.	Do.	400	S

Name of Factory, with full name and address of Managing Agents or Proprietors	Location.	District.	Nearest Railway Station.	Nearest Steamer Station.	Daily cane-crushing capacity in tons.
14. *The Lakshmi Devi Sugar Mills, Ltd., M/A. Messrs. Agarwal & Co., P.O. Chhitauni.	Chhitauni.	Gorakhpur.	Chhitauni, B.N.W.R.	Barhaj	400/500 DS
15. *Ishwari Khetan Sugar Mills, Ltd., M/A. Devidutt Surajmull, Padrauna, Gorakhpur. (Tel. Khetan—Padrauna)	Lakshmiganj. (Tel. Khetan— Lakshmiganj.)	Do.	Lakshmiganj, Do.	Do.	500 S
16. *The Ramkola Sugar Mills Co., Ltd., H. O. Nawashahr (Hazara). P. B. Lala Isher Dass M.A., L.L.B., M.L.A. Nawashahr Via Abbottabad. N. W. F. P. Chairman, Lala Balmokand Shah Sawhney, Managing Director. (Tel. Timber-Nawashahr, Hazara).	Ramkola. (Tel. Sugar— Ramkola.)	Do.	Ramkola, Do	Revelganj	700/900 DS
17. *Maheshwari Khetan Sugar Mills, Ltd., M/A. Messrs. Devidutt Chaturbhui, P. O. Ramkola. (Tel. Khetan—Ramkola.)	Ramkola.	Do.	Ramkola	Do. Barhaj.	70/750 DS
18. *Padrauna Rajkrishna Sugar Works, Ltd., M/D. R. B. Jagadish Narain Singh "JAGDISH GARH" Padrauna. (Tel. Krishna—Padrauna.)	Padrauna.	Do.	Padrauna	Do.	800 S
19. *Jagadish Sugar Mills, Ltd., M/A. Raja Bahadur Brijnarayan Singh & Co., Padrauna. (Tel. Jagadish—Padrauna.)	Kathkuiyan, Padrauna P. O.	Do.	Kathkuiyan, Do.	Do.	400 DS

20. *The United Provinces Sugar Co., Ltd., M/A. James Finlay & Co. Ltd., 1, Clive Street, Calcutta. (Tel. Mercator—Calcutta.)	Seorahi P. O. (Tel. Chini— *Seorahi.)	Do	Tamkahi Rd., Po.	Do.	925	DS
21. *Ganesh Sugar Mills, Ltd., M/A. Poddar Jarpuria & Co., P. 23, Vivekananda Road Calcutta. (Tel. Jaipuria, Calcutta.)	Pharenda. (Tel. Ganesh- Pharenda B.N.W.Ry.)	Do.	Pharenda, Do.	Do.	700	DS
22. Ledi Sugar Factory, Lessees:—Karamchand Thapar & Bros, Ltd. 5, Royal Exchange Place, Calcutta, (Tel. Spiritual, Calcutta).	Ledi, P. O. Nichlaul (Tel. Spiritual, Siswabazar.)	Do.	Siswa Bazar, Do.	Do.	80	S
23. *Campierganj Sugar Mills, Ltd., M/D. K. B. M. Nesarullah, Esq., B.A., M.L.C. (Tel. Nesarullah, Gorakhpur).	Campierganj. (Tel. Campierganj, Mills Campierganj.)	Do.	Campierganj, Do.	Do.	300	S
24. †The Pashupati Industrial, Agricultural & Sugar Corporation, Ltd., Nautanwa.	Nautanwa.	Do.	Nautanwa, Do.	Do.		
25. *The Madho Kanhaya Mahesh Gauri Sugar Mills, Ltd.	Munderwa. (Tel. Jagadish Munderwa.)	Basti.	Munderwa, Do.	Do.	650/700	S
26. *Basti Factory of The Basti Sugar Mills Co., Ltd., M/A. Narang Bros. & Co., Ltd., 3, Montgomery Road, Lahore. (Tel. Narang, Lahore).	Basti. (Tel. Sugar Fac- tory Basti.)	Do.	Basti, Do.	Ajodhyaghat	800	DC
27. *Walterganj Factory of The Basti Sugar Mills Co., Ltd., M/A. Narang Bros. & Co., Ltd., 3, Montgomery Road, Lahore. (Tel. Narang, Lahore).	Walterganj. (Tel. Sugar Fac- tory, Walterganj.)	Do.	Walterganj, Do.	Do.	700/800	DS

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	District	Nearest Railway Station	Nearest Steamer Station.	Daily cane-crushing capacity in tons.
28. The Popular Sugar Co., Ltd., Manager, L. Kam Nath Narang M/A. Narang & Co., Ltd., Basti. (Tel. Narang, Basti)	Barhni. P. O. Ramduttganj (Tel. Popsko, Barhni, B.N.W.)	Basti.	Barhni, R.N.W.R.	Barhaj	800/1000 DS
29. *†Shiromani Sugar Mills, Ltd., M/A. Lal G. B. Pal & Co., C O. The Traders Bank Ltd., Lahore.	Khalilabad. (Tel. Sugar Mills Khalilabad)	Do.	Do.	Do.	400
30. †Lakarmandi Sugar Mills Co., Ltd., Lakarmandi M/A. Pal & Co., P.O. Mahson. Dist. Basti. (Tel. Lakarmandi Sugar Co., Katra) (B & N. W. Ry.,)	Lakarmandi. P.O. Sheodayal- ganj (Gonda.)	Gonda	Katra, Do.	Do.	100/150 DS
31. *The Seksaria Sugar Mills, Ltd., M/A. Govindram Ramnath & Co., 219, Chittaranjan Avenue. (North.) P.O. Beadon Street, Calcutta. (Tel. Seksariaco, Calcutta.)	Babhnan. (Tel. Seksariaco Babhnan.)	Do.	Do.	Do.	800 DS
32. *Nawabganj Sugar Mills Co., Ltd., M/A. Narang Bros. & Co., Ltd., Montgomery Road, Lahore. (Tel. Narang, Lahore.)	Nawabganj. (Tel. Sugar Mills Nawabganj, Gonda.)	Do.	Do.	Do.	1850 DS
33. *Balrampur Sugar Co., Ltd., Balrampur Factory. M/A. Begg Sutherland & Co., Ltd., P. B. 21, Cawnpore. (Tel. Begg, Cawnpore.)	Balrampur (Tel. Balsuco Balrampur.)	Do.	Balrampur, Do.	Barhaj	700 S

34. *Balrampur Sugar Co., Ltd., Tulsipur Factory, M/A. Begg, Sutherland & Co., Ltd. P.B. 21, Cawnpore. (Tel. Begg—Cawnpore.)	Tulsipur, (Tel. Talsuco— Tulsipur.)	Do.	Tulsipur.	Do.	Ajodhya Ghat.	700	S
35. *Gulzarimall Ramchand Sugar Mills. Shahalmi Gate. Lahore. (Tel. Mala—Lahore.)	Jarwal Road, (Tel. Mala Jarwal Road.)	Bahraich	Jarwal Rd.	Do.	Do.	750	S
36. *The Burhwal Sugar Mills Co., Ltd., M/D. Durga Shanker, Dayaram, Collectorganj, Cawnpore, (Tel. Ganeshji, Cawnpore.)	Burhwal, (Tel. Ganeshji Burhwal.)	Barabanki.	Burhwal, B.N.W.R & E. I. R.	Do.	Do.	300*	DS
37. *†Gulzarimall Ramchand Sugar Mills. Shahalmi Gate. (Tel. Mala—Lahore)	Aishbagh. (Tel. Mala Lucknow.)	Lucknow.	Aishbagh, E. I. R.	Do.	Do.	400*	
38. *Ratna Sugar Mills. Co., Ltd., M/A. Kashiprasad & Co., 107, Street Field Road, Benares City. (Tel. Ratna—Benares.)	Shahganj, (Tel. Ratna Shahganj, Jaunpur.)	Jaunpur.	Shahganj,	Do.	Balia.	500	DS
39. *Shree Krishna Deshi Sugar Works, Lessees. Shervani Bros. & Co., Ltd., Jhusi.	Jhusi, (Tel. Shervani Bros. Jhusi, Dist. Allahabad.)	Allahabad,	Jhusi,	B.N.W.R.	Do.	400*	S
40. †Tribeni Deshi Sugar Works, Prop. A. Beniprasad, Naini, (Tel. Madho-Naini.)	Naini	Do.	Naini,	E.I.R.	Buxar.	200	S
41. *The Lakshmi Sugar & Oil Mills, Ltd., H.O. Amritsar Managing Director—Lala Bansidhar.	Hardoi (Tel. Lakshmi.)	Hardoi.	Hardoi,	Do.	Do.	1200	DS
42. *The Seksaria Biswan Sugar Factory Ltd., M/A. M/S. Govindram Bros. Ltd., Seksaria Chambers, 139, Meadows Street, Fort, Bombay (Tel. "Fairtrade" Bombay.)	Biswan, (Tel. Factory Biswan.)	Sitapur.	Biswan,	B.N.W.R.	Barhaj.	1200	Double Tandum.

Name of Factory, with full name, and address of Managing Agents or Proprietors.	Location.	District.	Nearest Railway Station.	Nearest Steamer Station.	Daily cane- crushing capa- city in tons.
43. *The Oudh Sugar Mills, Ltd., M/A. Birla Bros. Ltd., Oriental Building, Esplanade Road, Fort, Bombay (Tel. Lucky-Bombay).	Hargaon, (Tel. Birla— Hargaosugar- mills.)	Sitapur.	Hargaon, R.K.R.	Barhaj.	1700/1800 DS
44. *The Lakshmi Sugar Mills Co., Ltd., Chairman Rai Bahadur Seth Ram Rattan 24, Mozang Road, Lahore, (Tel. Seth-Lahore).	Maholi, (Tel. Lakshmi— Maholi.)	Do.	Maholi, E.I.R.	Buxar.	1500 DS
45. *Aira Sugar Factory P.O. Aira, Estate, Dist. Kheri, U.P. Prop. Indra Singh & Sons Ltd., Tatanagar. (Tel. Wireforms) Tatanagar.	Khamaria, (Tel. Office at Lakhimpur.)	Kheri.	Lakhimpur, R.K.R.	Barhaj.	150 DS
46. *The Hindusthan Sugar Mills. Ltd., M/A. Bachhraj & Co., Ltd., 395, Kalbadevi Bombay, (Tel. Shree-Bombay).	Golagokaran Nath, (Tel. Shree- Golagokaran nath)	Do.	Golagokaran- nath, Do.	Do.	1800 DS
47. *Rosa Sugar Works & Distillery of Carew & Co., Ltd., M/A. Lyall Marshall & Co., 4, Fairlie Place, Calcutta. (Tel. Ghat, Calcutta.)	Rosa, (Tel. Carew, Rosa.)	Shahjahanpur.	Rosa Jn. E.I.R.		700* S
48. *H. R. Sugar Factory, Ltd., M/D. Sahu Ram Narain Sahib, Nekpur, Bareilly.	Bareilly, (Tel. Sugar— Bareilly.)	Bareilly.	Bareilly Jn. E.I.R., R.K.R.	Buxar.	750 S
49. *Khandke Sugar Mills. Ltd., M/A. D. N. Khandke & Co., 63, Bhandari St. Bombay No. 4. (Tel. Progress-Bombay).	Baheri, (Tel. Khandke— Baheri.)	Do.	Baheri, R.K.R.	Barhaj.	295 S

		Do.	Do.	Do.	1000	DS
50. *The Kesar Sugar Works, Ltd., M/A. Kilaehand Devchand & Co., Apollo Street, Bombay. (Tel. Seeds, Bombay.)	Do. (Tel. Kesar— Isaheri)					
51—52. *L. H. Sugar Factories, and Oil Mills, Ltd., Pilibhit. M/D. Sahu Jagdish Prasad, Pilibhit.	Pilibhit, (Tel. Crystal— Pilibhit.)	Pilibhit.	Pilibhit,	Do.	1750 Double Tandom)	S
53. *Raza Sugar Co., Ltd., M/A. Govan Bros. (Rampur), Ltd., Rampur State	Rampur, (Tel. Razaco— Rampur State).	Rampur State	Rampur,	E.I.R.	1000	DS
54. *Buland Sugar Co., Ltd., M/A. Govan Bros. (Rampur), Ltd., State Rampur State	Rampur, (Tel. Buland— Rampur State).	Do.	Do.	Do.	1000	DC
55. *Upper Ganges Sugar Mills, Ltd., M/A. Birla Brothers, Ltd., 8, Royal Exchange Place, (Tel. Lucky—Calcutta.) Calcutta.	Seohara (Tel. Birla— Seohara).	Bijnor.	Seohara	Do.	1100	
56. *Seth Shiv Prasad Banarsidas Sugar Mills, Prop. Messrs. Shiv Prasad Banarsidas Aggarwal, 86, Lake Road, Lahore. (Tel. Bindal—Lahore.)	Bijnor, (Tel. Aggarwal, Bijnor).	Do.	Bijnor.	Do.	1000	
57. †The Ganga Sugar Works, M/A. The Ganga Glass Works Balawali, Bijnor	Balawali.	Do.	Balawali	Do.	100* 15/2 (Cane) (Gur)	
58. *The Dhampur Sugar Mills, Ltd., M/D. Shau Ram Bharose Lall Kothi Bansmandi, Bareilly.	Dhampur, (Tel. Sugarmills, Dhampur).	Do.	Dhampur,	Do.	750/800	
59. ‡ Bhogpur Sugar Factory, M/P. Raja Hari Kishen Kaul, & Ishwardas Lakshmidas, Hughes Road, Bombay	Bhogpur. P. O. Najibabad.	Do.	Najibabad.	Do.	50	
60. *Jailakshmi Sugar Co., Ltd., M/D. Jishnu Lal Esq., H. O. Doiwala	Doiwala. (Tel. Jailakshmi Doiwala).	Dehra Dun.	Doiwala	Do.	350*	DC/DS
				Karachi.		

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	District.	Nearest Railway Station.	Nearest Steamer Station.	Daily Cane-crushing capacity in tons.
61. †Jwalapur Sugar Factory,	Jwalapur.	Saharanpur	Jwalapur, E.I.R.	Buxar.	100
62. *The Ganga Sugar Corporation, Ltd., College Road, Chairman—R. B. L. Isher Dass. M. A. L. B. M. L. A. (Tel. Gansuco, Rawalpindi.)	Deoband. (Tel. Sugar Deoband).	Do.	Deoband, N.W.R.	Do.	400/600 DC
63. *Rai Bahadur Narain Singh Sugar Mills Ltd. M/D. S. S. Ranjit Singh, 2, Curzon Road, New Delhi.	Lhaksar.	Do.	Lhaksar. E.I.Ry.	..	1000
64. †The Lord Krishna Sugar Mills, Ltd. Regd. Office 88, Lake Road, Lahore.	Do	Do	Do	Do	1250 DS
65. *Upper Jumna Swadeshi Sugar Mills, Co., Ltd., M/A, Hariraj Swarup Rajendralal & Brothers, Muzaffarnagar (Tel. Swesugmill—Muzaffarnagar.)	Mansurpur. (Tel. Swesugmill Mansurpur).	Muzaffarnagar.	Mansurpur. N.W.R.	Karachi	1000/1200 DS
66. *Upper India Sugar Mills, Ltd. M/A. Mitra Mandal, Khatauli. (Tel. Sugar, Khatauli.)	Khatauli.	Do.	Khatauli, Do.	Do.	1000 DS
67. *Amritsar Sugar Mills, Co., Ltd., M/D. Sirdar Amar Singh Sahab, Amritsar (Punjab.) (Tel. Refiners, Amritsar)	Rohanakalan. P.O. Rohanamills. (Tel. Sugar Mills, Rohanakalan. N. W. R.)	Do.	Rohanakalan,	Buxar.	1000* DS

68. *Upper Doab Sugar Mills, Ltd., M/A. Hariraj Swarup Rajendralal Debi Prasad & Brothers, Muzaffarnagar (Tel. Swesugmill—Muzaffarnagar)	Shamli, (Tel. Sugarmills— Shamli).	Do.	Shamli, S.S.L.R.	Bombay.	1400	DS
69. *The Diwan Sugar Mills Prop. Messrs. Dhanpatmal Diwanchand, Lyallpur, (Punjab) (Tel. Dhanpat, Lyallpur.)	Sakhoti-Tanda, (Tel. Diwanmills, Sakhoti-Tanda N. W.)	Meerut.	Sakhoti-Tanda, N.W.R.	Do.	400*	DS
70. *Daurala Sugar Works, Prop. Delhi Cloth and General Mills Co., Ltd., Delhi (Tel. Yarn, Delhi.)	Daurala.	Do.	Daurala, N.W.R.	...	100	
71. *Jaswant Sugar Mills, Prop. Lala Jaswantrao Churamani, M.A., Meerut. (Tel. Godfearing—Meerut.)	Meerut City.	Do.	Meerut City, Do.	Buxar.	400*	DS
72. *Ram Laxman Sugar Mills, Managing Proprietors. R. B. L. Nanakehand, & R. S. Chiranji Lal & Sons Rais and Millowner, Sadar Bazar Delhi (Tel. Consult—Delhi.)	Mohiuddinpur, (Tel. Sugarmills, Mohiuddinpur, N. W.)	Do.	Mohiuddinpur, Do.	Do.	600/800*	
73. *Modi Sugar Mills, Ltd., M/A. Rai Bahadur Multanimul & Sons, Patiala. (Tel. Multanimul, Patiala)	Begamabad, (Tel. Modimills Begamabad).	Do.	Begamabad, Do.	Do.	700/1000	DS
74. *Simbhaoli Sugar Mills, Ltd., Chairman, Lt. Sardar Raghbir Shing Sandhanwalla, O. B. E. (Tel. Sandhanwalla Simbhaoli, E. I.)	Simbhaoli, P. O. Baksar.	Do.	Simbhaoli, E.I.R.	...	400	DS

Name of factory, with full name and address of Managing Agents or Proprietors.					
Name of factory, with full name and address of Managing Agents or Proprietors.	Location.	District.	Nearest Railway Station.	Nearest Steamer Station.	Daily cane-crushing capacity in tons.
75. †The Muradnagar Sugar Works Prop. M/S. Bhanmal Gulzarimal, Iron Merchants, Chawri Bazar, Delhi (Tel. Bhanmal—Delhi.)	Muradnagar.	Meerut	Muradnagar, N.W.R.	...	100 DS
76. †The Punjab Sugar Mills Co., Ltd., M/A. Narang Brothers & Co. Ltd., 3, Montgomery Road, Lahore (Tel. Narang—Lahore.)	Kichha, (Tel. Sugar Factory, Kichha.)	Naini Tal	Kichha, R.K.R.	Burhaj	800 DS
77. *L. H. Sugar Factories & Oil Mill, Ltd., M/D. Sahu Jagdish Prasad Sahib Pilibhit	Kashipur, (Tel. Crystal Kashipur.)	Do.	Kashipur, Do.	Do.	500
78. *The Neoli Sugar Factory. Prop. The Saraswati Sugar Syndicate, Ltd. 4, Meleod Road, P. B. 255, Lahore. (Tel. Sucrese—Lahore.)	Manpore, Nagaria, (P. O. Neoli), (Tel. Shervani— Neoli, Etah.)	Etah	Manpore-Nagaria, Do.	Do.	450/600 DS
79. The Unao Sugar Mills. Lessee. Mr. S. B. Chowdhury, B.A., 1, Canal Bank Road, Lahore.	Unao.	Unao.	Unao E.I.R. & B.N.W.R.	Buxar.	Gur only 75
80. *Kamlapat Motilal Gutaiya Sugar Mills, Prop. Messrs. Kamlapat Motilal P. B. 69, Cawnpore. (Tel. Lalmoti—Cawnpore.)	Cawnpore, P. O. Cawnpore.	Cawnpore.	Rawatpur, B.B. & C.I.	Do.	Gur 100 cane also
81. *Cawnpore Sugar Works, Ltd., Cawnpore refinery M/A. Begg Sutherland & Co., Ltd., P. B. 21, Cawnpore. (Tel. Begg, Cawnpore.)	Cooperganj.	Cawnpore,	Cawnpore, E.I.R.	Buxar.	Gur only 73
82. Experimental Sugar Factory, Imperial Institute of Sugar Technology.	Nawabganj.	Do.	Rawatpur, B.B. & C.I.	Do.	24*

83. *Amroha Sugar Factory,
Prop. The Ganesh Flour Mills Co., Ltd.
Delhi.
(Tel. Ganesh, Delhi.)

400

Do.

E.I.R.

Amroha,

Moradabad.

Amroha,
(Tel. Ganesh.)

84. †Ajudhia Sugar Mills
Prop. Lakshmi Sugar Mills
Co., Ltd., Maholi.

1000 Tons

Raja-Ka Sahaspur

Do

PUNJAB

1. Jagatjit Sugar Mills Co., Ltd.,
M/A. Narang Brothers & Co., Ltd.,
3, Montgomery Road, Lahore.
(Tel. Narang—Lahore.)

600

Karachi.

N.W.R.

Phagwara,

Kapurthala

Phagwara,
(Tel. Sugar Factory
Phagwara)

DC

2. †Malik Sugar & General Mills
Phulwara

100

Byxar.

Do.

Phulwara,

Sargodha.

Phulwara.

3. The Gujranwala Sugar Mills, Co., Ltd.,
M/A. Narang Bros., & Co., Ltd.,
3, Montgomery Road, Lahore.
Sing & Co., Ltd., Civil Station,
Gujranwala.
(Tel. Sugarmills—Gujranwala.)

300

...

Do.

Rahwali,

Gujranwala.

Rahwali.
(Tel. Sugarmill—
Rahwali.)

DS

4. †The Bhalwal Sugar Mills, Co., Ltd.,
M/A. Capt. Malik Sardarkhan Noon,
Tahsil Bhalwal.

100

Do.

Do.

Bhalwal,

Shahpur.

Bhalwal,
P. O. Sardarpur.

2

5. †The Amritsar Sugar Mills, Co., Ltd.,
M/D. Sardar Amar Singh, Amritsar.
P.O. Khalsa College, Amritsar.

Gur only
42 tons.

Do.

Do.

Amritsar,

Amritsar.

Gr. Trunk Road,
Amritsar.

6. †The Lakshmi Sugar Mills, Co., Ltd.,
M/D. B. Bansidhar Saheb,
Chatwind Gate, Amritsar.

Gur only
40 mds.

Do.

Do.

Do.

Do.

Chatwind Gate,
Amritsar.

Name of Factory, With full name and address of Managing Agents or Proprietors.	Location.	District.	Nearest Railway Station.	Nearest Steamer Station.	Daily cane-crushing capacity in tons.
7. *Saraswati Sugar Mills Prop. The Saraswati Sugar Syndicate, Ltd., 4, McLeod Road, P.O. Box No. 255, Lahore. (Tel. Sucrose, Lahore.)	P. O. Abdullapur, (Tel. Saraswati —Abdullapur.)	Ambala	Jagadhri. N.W.R.	Ruxar.	450 DC
8. †The Punjab National Sugar Mills, Prop : Messrs. Sk. Mohammad Ismail Moula Bakhsh, Lyallpur. (Tel. Ahmadi, Lyallpur)	Lyallpur.	Lyallpur	Lyallpur.	Do.	70
9. †The Pattoki Sugar Works, Pattoki, The Amritsar Distillery Co., Ltd., Amritsar.	Pattoki.	Lahore.	Pattoki.	...	100
<u>ORISSA.</u>					
1. Aska Sugar Works & Distillery, Prop. Messrs. Damodar Sahu, and Brothers (Tel. "Massecuite" Aska.)	Aska.	Ganjam.	Berhampur, B.N.R.	...	100/120*
2. Jeypur Sugar Co., Ltd., M/D. G. Subba Rao, B. Sc., C. P. E. (Glasgow) Raya Ghada. (Dist. Koraput.) (Tel. Jeysuco Rayaghada.)	Raya Ghada.	Koraput.	Raya Ghada. B.N.R.	Vizagapatam.	150

MADRAS.

1. The Vizagapatam Sugars & Refinery Ltd., Vizagapatam. M/A. Messrs. Andhra Engineering Co., Ltd., Vizagapatam. (Tel. Engineers—Vizagapatam.)	Thummapala, (Tel. Sugars— Anakapalli.)	Vizagapatam. Anakapalli, M.S.M.R.	Do.	125	DŠ
2. Etikoppaka Sugar Factory. M/A. The Etikoppaka Co-operative, Agriculture & Industrial Society Ltd. (Tel. Sugar Factory Etikoppaka, Narsipatnam Road)	Etikoppaka.	Do. Narasapatam Road. Do.	Do.	80	DŠ
3. The Sri Rama Sugar Mills, Ltd. Prop. Raja of Bobbili, Rajah of Venkatagiri, and others Bobbili, (Tel. Sugar — Bobbili.)	Bobbili.	Do. Bobbili, B.N.R.	...	150	DŠ
4. The Vuyyuru Co-operative Agricultural Industrial and Credit Society, Ltd. Vuyyuru. (Tel. Ramakistna, Vuyyuru.)	Vuyyuru.	Kistna Bezwada, M.S.M.R.	...	850/1200	DŠ
5. Sree Ramkrishna Sugar Mills, Prop. Raja Ravu Ram Krishna Ranga Rao Bahadur, Zamindar of Kirlampudi, Bobbili and R.B., C.V.S., Narsinha Raju Garu, Etikoppaka.	Kirlampudi.	East Godavari. Samalkot, M.S.M.R.	...	120	
6. *The Deccan Sugar and Abkari Co., Ltd., M/A. Parry & Co., Ltd., P. B. No. 12, Madras. (Tel. Parry Madras.)	Samalkot, (Tel. Deccan — Samalkot.)	Do. Do. Do.	Cocanada,	Gur only 40 tons.	C
7. *The East India Distilleries and Sugar Factories Ltd. M/A. Parry & Co., Ltd., P. B. 12, Madras. (Tel. parry Madras.)	Nellikuppam, (Tel. Distimulo —Nellikuppam.)	South Arcot. Nellikuppam. S.I.R.	Cuddalore.	1000*	C

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	District	Nearest Railway Station.	Nearest Steamer Station.	Daily cane-crushing capacity in tons.
-8. The India Sugars and Refineries, Ltd., M/A. V. Ramalingam, Esq., Hospet.	Hospet, (Tel. Sugars-Hospet)	Bellary.	Hospet, M.S.M.R.	...	500* DS
9. †Coimbatore Lakshmi Sugar Mills, Ltd., M/A. G.K.V.R. & Co., Podanur.	Podanur.	Coimbat., e.	Podanur, S.I.R.	..	50*
10. Al. Vr. St. Sugar Mills and Distillery Prop: Al. Vr. St. Veerappa Chettiar, Zamindar of Devaram, Devakottah.	Tachanalur, (Tel. Sugarmill Tachanalur.)	Tinnevelly.	Tinnevelly. Jn., Do.	Tuticorin.	Gur only 12 tons.
11. T. A. Rm. Lakshmi Sugar Mills, Alwartirunagari.	Near Laksmi- natope.	Do.	Alwartirunagari.	Do.	Gur only 6 tons.
12. †The Kalyanpur Sugar Mills, Ltd. Kallianpore, (S. India.)	Kallianpur.	S. Kanara.	Mangalore.	Malpe.	60
13. †The Madras Sugars, Ltd., Mailpatti, (N. Arcot). M/A. The Executive Directors, The Madras Sugars Ltd., 6, Woods Road, Mount Road, Madras.	Mailpatti.	N. Arcot.	Mailpatti,	...	50
14. †The Southern India Sugar Co., Ltd. M/A. Ratnam Limited Pugalur, S. I. Ry. P.O. Velayuthampalayam (Tel. Sugars)	Pugalur.	Trichinopoly.	Pugalur, S.I.Ry.	Madras.	150
15. †The Shrimati Sugar Mills Ltd. Campbell Buildings, Lalgudi P.O. (Trichinopoly).	Katur.	Do.	Lalgudi.	Do.	250

10. ‡ The Godavari Sugar Mills Ltd. M A R. S. Kotak & Co., 79, Desouza Street 79, Vadgadi, Fort, Bombay	Kanhegaon.	Do.		400/500
11. †The Gandevi Sugar Works & Distillery, Co. Ltd., P.O. Gandevi, Dist. Gujrat.	Gandevi.	Baroda	Gandevi, G.B.Ry. Billimora Bunder Billimora B.B. & C.I.Ry.	250
<u>SIND.</u>				
1. *The Pioneer Sind Sugar Mills, Co., Ltd., M/A. Mohatta & Co., Ltd., Wood Street, Karachi. (Tel. Marketwala—Karachi.)	Mohatta Nagar, (Tel. Sugarmills— Mohatta Nagar.)	Nawabshah	Mohatta Nagar. Jodhpur Ry.	300 DS
<u>CENTRAL INDIA.</u>				
1. The Jaora Sugar Mills, Jaora (C. I.)	Jaora.	Jaora State.	Jaora, B.B. & C.I.	450/600
2. Bhopal State Sugar Industries, (Chairman—The Economic Adviser Govt. of Bhopal.)	Sehore.	...	Sehore,	750
3. †Shri Lakshmi Narayan Sugar Works, Ltd. M/A. Gupta Bros., & Co. Harpalpur (Bundelkhand)	Harpalpur (Tel. Laxmichini Harpalpur)	Bundelkhand	Harpalpur G.I.P.R.	300 S
<u>RAJPUTANA.</u>				
1. †Sri Ganganagar Sugar Mills Ltd. M/A. Seth Sunder Singh.	Ganganagar.	Bikaner State.	...	600 DS
2. Mewar Sugar Factory of Karera M/A. Ramkrishnadass Chandiprasad 136, Cotton Street, Calcutta,	Karera.	Udaipur.	Karea. U.C.Ry.	250/300 DS

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	District	Nearest Railway Station.	Nearest Steamer Station.	Daily Cane-crushing capacity in tons.
3. †The Scindia Sugar Mills Ltd., Dabra (Gwalior), M/A. Lachha Singh Bedi & Sons Ltd., 4, Dalhousie Sq. E. Calcutta.	Dabra	Gwalior.	Dabra, G.I.P.	..	750 DS
<u>HYDERABAD. (Deccan)</u>					
1. The Nizam Sugar Factory, Nizamabad M/A. H.E.H. The Nizam's Industrial Trust Fund Represented by the Hyderabad Construction Co Ltd., Abto's Road, Hyderabad. DN.	Bodhan	Hyderabad. (Deccan)	Bodhan Sugar Factory, Siding Station (Nizam St. Ry.)	.	1000 DS
<u>N. W. F. PROVINCE.</u>					
1. †The Frontier Sugar Mills & Distillery Limited,	Takhat Bai	Mardan	400/600
<u>BURMA.</u>					
1. *The Sahmaw Sugar Factory of the Burma Sugar Co., Ltd., (Tel. Clobberfeld, Rangoon.)	Sahmaw. (Tel. Shordis— Sahmaw.)	Mytkyina.	Sahmaw, Burma Rly.	..	800 DS
2. †New Burma Amrit Sugar Mills, Ltd. M/A. Amritlal Ojha & Co., (Burma) Ltd., 619, Merchant Street, Rangoon. (Tel. Ojhaco—Rangoon)	Hninpale, P. O. Bilin. (Tel. Amrit Sugar Works)	Thaton, (L. Burma.)	Hninpale, Do	.	400 DS
3. *The Zeyawadi Sugar Factory Ltd., M/D. Chandradeva Parkash Sinha, Esq., Zeyawadi (Burma.) (Tel. Prakash, Rangoon.)	Zeyawadi. (Tel. Sugar Zeyawadi).	Toungoo.	Zeyawadi	Rangoon.	1000/1200 DS

**PROVINCIAL DISTRIBUTION
OF
SUGAR MILLS IN INDIA
(1938-39).**

Province.	Cane Factories	Gur refineries only.	TOTAL
Bengal ...	10	...	10
Bihar ...	36	1	37
United Provinces ...	82	2	84
Punjab ...	7	2	9
Madras ...	12	3	15
Bombay ...	11	...	11
Central India & Rajputana ...	6	.	6
Other Provinces & States	6	1	7
TOTAL ...	170	9	179

Burma	3	...	3
-----------	-----	---	-----	---

No. of factories (including Gur Refineries) actually working in the season 1938-39 was (about)	141
--	-----

No. of Factories (including Gur Refineries) that did not work during the season 1938-39 (Factories under construction included.)	38
--	----

Total No. of factories within the membership of the Indian Sugar Mills Association (on 1st July, 1938)	118
--	-----	-----	-----	-----

THE INDIAN SUGAR INDUSTRY—

(1940 Annual)

With a foreword by
Dr. SYED MAHMUD, Ex-Minister, Bihar Govt.

Extracts from the Foreword :

"Messrs. Gandhi & Co. (Publishers) deserve to be congratulated on this Annual publication which is of very great value to all interested in the sugar industry."

"This Annual, which supplies a keenly felt want of an authoritative and indispensable survey of the Indian sugar industry complete with an intelligent discussion of the problems before the industry, and containing useful suggestions for reform in the industry in regard to the current problems is constantly referred to by officials and non-officials who attach considerable value to the well-thought out views expressed therein."

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- The Sugar Industry (Protection) Act, 1932, Temporary Extension Act, 1938, and (Protection) Act, 1939.
- The Sugar Factories Control Act of U. P. and Bihar, as amended by the latest Amendment Acts enacted in November, 1940, and January, 1941.
- Extracts of U. P. and Bihar Sugar Factories Control Rules, as amended, upto December, 1940.
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Kharkhari Coal Co., Ltd

Member { U. P. and Bihar Sugar Control Board.
Bihar Labour Inquiry Committee.

Director : Indian Sugar Syndicate Ltd.

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The Indian Finance, Calcutta 27th January, 1940

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The Commerce, Bombay 20-4-1940

We have not the least doubt that the publication has had, and will continue to have, wide and welcome reception.

Such is the more assured by reasons of Mr. Gandhi's ideas*finding ready approval everywhere. The most recent instance is the acceptance of his Resolution by the U. P. Sugar Control Board, suggesting that any changes in the import tariff on Sugar or in the Excise Duty on Sugar should be made by the Government of India in the month of November, and not in month of March or April.

The essence of Mr. Gandhi's Annual lies in the intelligent focussing of public attention on the pressing problems of the industry. The 1939 Annual is no exception

The Capital, Calcutta 7-3-40

Mr. GANDHI has done much useful work in inaugurating a series of books of reference in the field of indigenous industry, and they grow in use and stature every year. The affairs of the Sugar Industry continue to be very much to the front and the Annual is INDISPENSABLE to those who would understand them properly.

The "Indian Sugar" (Monthly) Calcutta, February, 1940

"Maintains the reputation which the previous Annuals enjoyed & Contains a mine of information which is bound to be useful to both the student of Economics and the everyday business man. Mr. Gandhi deserves to be congratulated on the success which has attended his efforts all these years."

FOREWORD

By

Dr. Syed Mahmud, Ph.D.

Ex-Minister, Education, Development & Employment

Departments, Bihar Government.

Messrs. Gandhi & Co (Publishers) deserve to be congratulated on this Annual publication which is of very great value to all interested in the sugar industry. This Annual, which supplies a keenly felt want of an authoritative and indispensable survey of the Indian sugar industry complete with an intelligent discussion of the problems before the industry, and containing useful suggestions for reform in the industry in regard to the current problems, is constantly referred to by officials and non-officials who attach considerable value to the well-thought out views expressed therein.

The problem of all-India State control in relation to the sugar industry, referred to in the Annual, is doubtless a very important problem and I have no doubt that unless steps are taken for establishing all-India control over the industry in the sphere of regulation of production of sugar with a view to prevent mal-adjustment between demand and supply, resulting either in high prices or increased imports, cycles of overproduction and underproduction, and for regulation of the cane crop and of promoting measures of research work for achieving the desired object of reducing the cost of the raw material, by improving the quality of cane and increasing the yield per acre, the industry generally and the factories in U. P. and Bihar, particularly would be in the grip of a grave crisis. The institution of the measure of State control on the industry in the Provinces of U. P. and Bihar has doubtless been attended with various desirable results but unless a measure of state control extending over all the sugar producing areas is instituted, the factories within the main sugar producing belt and consequently millions of cultivators in these provinces will find it extremely difficult to maintain their position. The necessity of proper planning and of regulation of the cane crop to the requirements of the country for sugar, cannot be overemphasised and suitable steps should be taken to see that the cane crop is not allowed to go to waste due to lack of

its utilisation in the factories as is about to happen in 1940-41 season, as it has very serious repercussions upon the poor agriculturists.

I would therefore lay stress on the immediate necessity of long term all-India planning in the industry and of regulating the production of cane and sugar from year to year, and to take suitable measures for bringing about a reduction in the price of sugar as then alone it will be possible for the industry to continue its existence when the tariff protection is removed or reduced some time during this decade.

Chapra (Bihar)
24th February, 1941

Syed Mahmud.

PREFACE

1939-40 (and indeed 1940-41) will go down in memory as a season of unredeemed chaos and serious crisis for the Indian Sugar industry, particularly of the U. P. and Bihar. We may mention here only a few chief items which made the 1939-40 season unique in many ways.

The 1939-40 season recorded the maximum crushing of cane and the maximum production of sugar, the largest fluctuations in prices of sugar, the largest percentage of cane crushed in factories, the largest number of sugar factories working hitherto, the highest level of excise duty, maximum Government control, maximum divergence of opinion between the industry and the Governments of U. P. and Bihar as also indeed the Government of India leading to a loss of recognition of the Syndicate and consequent reconciliation and restoration of the recognition with further control on the industry, the establishment of a new authority *viz.*, the Sugar Commission in U. P. and Bihar invested with considerable powers, the era of highest cane prices and profits to cultivators accompanied by minimum profits and indeed even losses in the case of some factories, alterations in the excise and import duty in the middle of the season, adding to the confusion, imposition of Excess Profits Tax on the industry, the refusal of the Government of India to consider any measures of All-India control of the industry in spite of their professed sympathy with the condition of the industry in U. P. and Bihar, the introduction of measures for giving effect to the scheme of the manufacture of Power Alcohol in U. P. and of the preparation of similar legislation in Bihar, the usurping of the powers from the Syndicate which has been rendered almost innocuous, the internal dissensions amongst the members of the Syndicate, the malpractices adopted by members of the Syndicate in selling sugar below the fixed prices and in excess of the allotted quotas, the decision to take Direct sales of sugar in hand, the removal of the centre of the activities of the Syndicate from Calcutta to Cawnpore, the abandonment of the sliding scale for fixing cane prices in the U. P. and Bihar late in the season 1939-40 and the introduction of the principle of payment of a *deferred* price for cane on the results of sale of sugar, reinstatement of the policy of a flat, fixed (and also considerably lower) non-varying price of cane during the entire season in 1940-41, the fixation for the first time in the history of the industry of a quota of production in

factories in U. P. and Bihar where the working season was restricted to only 97 working days in spite of there being so much surplus standing crop of cane going to waste in absence its utilisation, reduction in the cane cess from 0.06 to 0.03 and the creation of a fund for compensating the growers for the unutilised cane etc. etc.

It has given us great satisfaction to find that our 1935, 1936, 1937, 1938 and 1939 Sugar Industry Annuals have received a progressively cordial welcome and highly encouraging response, from a very large circle of readers, officials as well as non-officials, interested in this great National Industry of India. Highly appreciative reviews of the Annual have also appeared in the leading national and International Journals. This has doubtless encouraged us to continue the regular publication of this Annual which may claim to be only authoritative and indispensable reference book endeavouring to discuss in an unbiased manner the various problems of the industry, and giving upto date and carefully compiled statistical and other relevant material pertaining to the course of the Industry from year to year. It will be a matter of great pleasure to us if the 1940 Annual meets with the same response as its predecessors.

As we have dealt with the various important events of the industry in the body of this Annual in considerable detail, it is hardly necessary for us to lay any stress here on the important problems now confronting the Industry. We have indicated briefly the main lines on which such assistance is needed, and we will be happy if the various suggestions made in this Annual are given effect to, for improving the efficiency of the Industry.

We shall consider ourselves amply rewarded if this publication will succeed in focussing the attention of all interested in the Industry, viz., the Government, the manufacturers, the cultivators, the consumers and the general public, to the imperative and urgent necessity of initiation of measures for the rationalisation and consolidation of this great national industry which has stopped the drain of about 16 crores of rupees a year for the import of sugar from foreign countries, which is supporting about 20 million agriculturists whose interests are indissolubly linked up with the future of this industry, which has given scope for the investment of indigenous capital to the extent of about 32 crores of rupees, which has created employment for about one lakh of workers, including about 2500 graduates in Science, Engineering, Arts and Commerce, which is also responsible for a considerable addition to the wealth of the agriculturist, as a result of the higher

monetary return from the land, consequent on the cultivation of improved varieties of sugar cane, and which has also led to the promotion of the village industry of gur manufacture.

Our object in dealing comprehensively with the various problems of the industry and of giving detailed statistics, is, *inter alia*, to educate public opinion and to make correct information easily available to the interested reader without his having to make any special effort for the same. Nothing will give us greater pleasure than to see this object being fulfilled.

✱

In order to facilitate reference we have given important legislative measures pertaining to the industry and no less than 43 statistical tables in the portion of the *Annual* called "The Sugar Industry at a Glance". We hope it will be found convenient and helpful. "The Sugar Industry at a Glance" contains the text of 'The Sugar Industry (Protection) Act, 1939, the Sugar (Excise Duty) Act, 1934, Extracts of important Articles from the Text of the International Sugar Agreement, Notifications prohibiting export of Sugar by sea up to 1942, the *personnel* of the U. P. and Bihar Sugar Control Board, and of the U. P. and Bihar Sugar Commission, the text of the U. P. and Bihar Sugar Factories Control Acts as amended up to February, 1941, and also extracts from the U. P. and Bihar Sugar Factories Control Rules, as amended up to February, 1941. Important *communiqués* of the Governments of the U. P. and of Bihar, issued in 1940, Speeches of the Hon'ble Dewan Bahadur Sir A. Ramaswami Mudaliar, Commerce Member of the Government of India, at the All-India Sugar Conference held in June, '940, and of Mr. P. M. Kharegat, C.I.E., I.C.S., Vice-Chairman of the Imperial Council of Agricultural Research at the 12th meeting of the Sugar Committee of the Council in June, 1940 are also given.

In Appendix 1, we have given a complete and up-to-date list of the Sugar Factories in India, showing the location, district, the nearest railway station and the nearest steamer station, the daily cane crushing capacity, and names and addresses, including telegraphic addresses of the Managing Agents or Proprietors.

Last year, we expressed the hope of publishing the *Annual* earlier than before, but we regret to have to say that this year also the publication was considerably delayed, due partly to the fact that very

important and far-reaching changes were made by the U. P. and Bihar Governments later in the year, i.e., in the months of October, November and December 1940 and January 1941, in the provisions of the Sugar Control Act and Rules, in regard to the change in the basis of the fixation of a minimum price of cane by abandoning the sliding scale and introducing a flat rate of minimum prices of cane throughout the entire season, the assumption of power by the Governments on the advice of the Sugar Commission for fixation of minimum and maximum prices for sugar and issues of quotas, imposition of a special cane-cess etc. etc. Due to our desire to pass these measures under review and to comment upon them, in order that the value of the Annual, being up-to-date, may continue right till the end of 1941, we have thought it fit to delay the publication. We hope that the readers will appreciate this, and that they will find our inclusion of these measures and our comments thereon to be useful.

Finding, however, that there is a very pressing demand for the publication of this Annual at an earlier date, we have definitely decided to respect such desire of the readers, with effect from the next edition. The 1941 Annual, will, therefore, be published in the 4th week of December, 1941 *definitely, irrespective of any considerations.*

As, however, this Annual is published so late, we hope that with its up-to-date statistics and other recent information, particularly in regard to the greater control assumed on the industry by the U. P. and Bihar Governments, it will be of greater use to the various Governments, Provincial as well as Central, in deciding the lines on which the problems before the industry may be tackled and in considering the advisability of the institution of an effective all-India control* on the industry with a view to ensuring a proper regulation of the industry.

We take this opportunity of thanking Mr. R. C. Srivastava, the able Director of the Imperial Institute of Sugar Technology, Cawnpore, for the very valuable and willing help he has given to us at all times. We are also thankful to Mr. Vishnu Sahai and Mr. C. A. McLean, Cane Commissioners of U. P. and Bihar respectively, Mr. D. R. Sethi, Director of Agriculture, Bihar, Mr. R. Hasan Chisti, Assistant Cane Commissioner of U. P. and several other Officials for the great help they have rendered to us in making this publication authoritative and up-to-date.

*We doubt if the establishment of a Central Advisory Council on Sugar announced in the Assembly, in March, 1941, without statutory powers, will be of much use in staving off the crisis in the industry.

We would be failing in our duty if we did not acknowledge the very valuable and willing assistance we have received from Mr. J. E. Pedly, M.C., C.I.E., I.C.S., Chairman, Sugar Commission, U. P. and Bihar, who has furnished us with considerable authoritative materials on the industry at short notice.

We are also grateful to Mr. J. N. Ghosh, Deputy Director of Commercial Intelligence and Statistics, Calcutta for the assistance he has given to us.

We greatly regret that the Government of India have recently decided to discontinue the publication of much statistical material in regard to imports, exports, etc. and to that extent we are handicapped. But this is inevitable. However, we will endeavour our best to give such information as is possible from available official and non-official sources.

In our last Annual, we observed that we did not have the benefit of a foreword from Dr. Syed Mahmud, the then Minister-in-Charge of Education, Development and Employment Departments in Bihar, due to his being unwell. We are delighted that this Annual has had the fortune of having a foreword from him. We have no doubt that the suggestions made by him will receive the most careful consideration of the Authorities.

In the end, we must express our great indebtedness to Mr. M. P. Gandhi, for the very valuable help he has rendered in the publication of this Annual.

Gandhi & Co (*Publishers*)

Calcutta,
20th March, 1941.

<p><i>N. B.</i>—The Government of India have passed an Act, continuing the present protective duty on sugar, i.e. Rs. 9-12-0 per cwt. up to 31st March, 1942.</p>

Glossary and Explanation of some Indian Terms

Gur or Jaggery.

Gur contains anything from 60 to 85 per cent. of sucrose. It may most nearly be described as hard-boiled massecuite.

About 28,00,000 tons of *Gur* are produced from cane annually in India for *direct consumption*, i.e., about $2\frac{1}{2}$ times the quantity of sugar manufactured in India in factories in 1939-40. A small quantity of *Gur* is also produced from palmyra, and Date-Palm.

Khandsari Sugar.

Khandsari sugar is an off-white direct consumption article produced in small factories, chiefly in the United Provinces. These factories generally crush with oil-engines and employ an open train followed by a centrifugal.

(The figures of production shown for Khandsari sugar are only conjectural estimates).

Rupce.

Rupce=1s. 6d. or 29.85 cents.

Lakh or Lac.

One hundred thousand i.e., $1\frac{1}{10}$ th of a million, i.e., 1,00,000.

Crorc.

10 millions, i.e., 1,00,00,000.

Ton.

One ton is equal to 20 cwt. of 112 lbs. avoirdupois or 27.2 maunds of 82-2 $\frac{1}{7}$ lbs. avoirdupois.

Maund.

One maund=82-2 $\frac{1}{7}$ lbs. avoirdupois.

Gandhi & Co. (Publishers)

The Indian Sugar Industry— (1940 Annual)

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The Sugar Industry at a Glance, 1940

Sugar Industry (Protection) Act, 1939†

(To Continue Till 31st March, 1941)

ACT NO. XX of 1939

An act to provide for the continuance for a further period of the protection conferred on the sugar industry in British India.

Whereas it is expedient to provide for the continuance for a further period of the protection conferred on the sugar industry in British India, and to extend the date before which the Central Government is required under section 3 of the Sugar Industry (Protection) Act, 1932 to lay before the Indian Legislature the proposals referred to in the said section;

It is hereby enacted as follows:—

1. This Act may be called the Sugar Industry (Protection) Act, Short Title 1939.

2. In section 3 of the Sugar Industry (Protection) Act, 1932, Amendment of Section 3 of Act XIII of 1932* for the figure "1939" the figure "1941" shall be substituted.

*As amended, section 3 of Act XIII, 1932, *viz.*, the Sugar Industry (Protection) Act, 1932, will read as under:—

3. The Governor-General-in-Council shall cause to be made by such persons as he may appoint in this behalf, an inquiry to ascertain if the protection of the sugar industry during the period from the 31st day of March, 1941 to the 31st day of March, 1946, should be continued to the extent conferred by this Act, or to a greater or lesser extent, and shall, not later than the 31st day of March, 1941 lay his proposals in this behalf before the Indian Legislature.

†Received assent of the Governor-General on the 21st April, 1939.
For the Sugar Industry (Protection) Act, 1932, and the Sugar Industry Protection (Temporary Extension) Act, 1938, see 1939 Sugar Industry Annual, pages 1 to 4.

3. In Item No. 17 of the First Schedule to the Indian Tariff Act, 1934:—

Amendment of
First Schedule
to Act XXXII
of 1934**

- (a) In the fourth column, for the words and figures "plus Rs. 7-4-0 per cwt." the words and figures "plus Rs. 6-12-- per cwt." shall be substituted;
- (b) in the last column, for the figure "1939" the figure "1941" shall be substituted.

It is hereby declared that it is expedient in the public interest that clause 3 of this Bill shall have immediate effect under the Provincial Collection of Taxes Act, 1931.

**As amended, Item No. 17 of the First Schedule to the Indian Tariff Act, 1934, will read as follows:—

17. Sugar, excluding tionery. confec-	Protective.	The rate at which excise duty is for the time being leviable on sugar, other than <i>khandsari</i> or <i>palmyra</i> sugar, produced in British India, plus Rs. 6-12-0 per cwt.	Upto March 31st, 1941.
---	-------------	--	---------------------------------

STATEMENT OF OBJECTS AND REASONS APPENDED TO THE SUGAR INDUSTRY (PROTECTION) BILL, 1939, INTRODUCED IN THE LEGISLATIVE ASSEMBLY.

The object of this Bill is to continue the protective import duty on sugar for a period of two years at a slightly reduced rate pending a further enquiry into the industry in 1940 as announced in the Government of India, Commerce Department, Resolution No. 127-T (2) 38, dated 30th March, 1939.

New Delhi,
The 28th March, 1939.

Note:—The total Import Duty (including the equivalent excise duty of Rs. 3 per cwt.) on sugar will be Rs. 9-12-0 per cwt. from 1st March, 1940, upto 31st March, 1941.

Sugar Excise Duty Act, 1934*

ACT NO. XIV OF 1934

(Incorporating amendments made up to March, 1940).

*An Act to provide for the imposition and collection of
an Excise Duty on Sugar.*

Whereas it is expedient to impose an excise duty on sugar produced in factories and to provide for the collection thereof: It is hereby enacted as follows:—

1. (1- This act may be called the Sugar (Excise Duty)
Short title and Act, 1934.
extent

(2) It extends to the whole of British India; including British Baluchistan and the Sonthal Parganas.

2. In this Act, unless there is anything repugnant in the subject
Definitions or context:—

(a) "Factory"*** means any premises in any part of which any manufacturing process connected with the production of sugar is being carried on or is ordinarily carried on with the aid of power;

(b) "owner" includes any person expressly or impliedly authorized by the owner of a factory to be his agent in respect of such factory;

(c) "Sugar" means any form of sugar containing more than ninety per cent. of sucrose;

*Received assent of the Governor-General on 1st May, 1934.

**With a view to make small Khandsari sugar factories liable to the payment of the Excise Duty, which they were evading by splitting the process of manufacture and having the different processes performed in separate premises the following words were dropped after premises in Clause 2 (a) "wherein or within the precincts of which twenty or more workers are working or were working on any day of the preceding twelve months and" by an amendment under clause 3 of the Indian Finance Act, 1939.

(d) "Khandsari Sugar" means sugar in the manufacture of which neither a vacuum pan nor a vacuum evaporator is employed; and

(e) "Palmyra Sugar" means sugar manufactured from jaggery obtained by boiling the juice of the palmyra palm.

3. (1) A duty of excise shall be levied on all sugar produced in any factory in British India and either issued out of such factory on or after the 1st day of April, 1934, or used within such factory on or after the said date in the manufacture of any commodity other than sugar, and shall be payable by the owner of the factory.

(2) The duty payable under sub-section* (1) shall be at the following rates, namely:—

- (i) on khandsari sugar at the rate of eight annas per cwt.;
- (ii) on all other sugar except palmyra sugar at the rate of Rupees three per cwt.;
- (iii) on palmyra sugar at such rate, if any, as may be fixed in this behalf by the Governor-General-in-Council after such enquiry as he may think fit.

4. (1) If any duty payable under section 3 is not paid within the time fixed by rules made in that behalf under this Act, it shall be deemed to be an arrear, and the authority to which such duty is payable may, in lieu thereof recover any sum not exceeding double the amount of duty unpaid which such authority may in its discretion think it reasonable to require.

(2) An arrear of duty, or any sum recoverable in lieu thereof under this section, shall be recoverable as an arrear of land revenue

N.B.—*With effect from 28th February, 1937, the Excise Duty was increased from annas ten per cwt. to Re. 1 per cwt. on Khandsari sugar and Rs. 2 per cwt. from Rs. 1-5-0 per cwt. on all other sugar except Palmyra sugar. With effect from 28 February, 1939, the Excise Duty on Khandsari sugar was decreased to 0-8-0 per cwt. by an amendment under Clause 3(b) of the Indian Finance Act, 1939. But this duty was made applicable to Khandsari sugar manufactured with the aid of power irrespective of the number of workers employed in a factory. Section 2(a) of this Act was accordingly amended by Clause 3(a) of the Indian Finance Act, 1939, whereby in the definition of 'factory' any reference to the number of twenty or more workers employed was omitted.

With effect from 1st March, 1940, the Excise Duty on Factory sugar was increased from Rs. 2 per cwt. to Rs. 3 per cwt.

There is no excise duty levied on Palmyra sugar, the production of which is small. The present duty on Khandsari sugar is 0-8-0 per cwt.

and shall be recoverable in addition to, and not in substitution for, any other penalty incurred under this Act.

5. No person shall issue any sugar out of a factory, except in accordance with the provisions of rules made in that behalf under this Act, or until such rules are made, in accordance with the general or special orders of the Local Government.

6. (1) The Governor-General-in-Council may, by notification in the *Gazette of India*, impose on sugar brought into British India from the territory of any State in India, not being territory which has been declared under section 5 of the Indian Tariff Act, 1894, to be foreign territory for the purposes of that section, a duty of customs equivalent to the excise duty imposed by this Act on sugar produced in British India.

(2) The Governor-General-in-Council may, by notification in the *Gazette of India*, declare that the provisions of the Land Customs Act, 1924, shall apply to the levy of the duty of customs imposed under this section, and on such declaration that Act shall apply as if the expression "foreign territory" in that Act included territory forming part of a State in India.

7. Whoever contravenes the provisions of section 5 shall be punishable with fine which may extend to two thousand rupees.

8. Whoever evades or attempts to evade the payment of any duty payable by him under this Act, or fails to supply any information which he is required by any rule made under this Act to supply, or knowingly supplies false information shall be punishable with imprisonment which may extend to six months or with fine which may extend to two thousand rupees, or with both.

9. Any court trying offences under this act, may order that any sugar, together with the packages or coverings thereof, in respect of which the Court is satisfied that an offence under this Act has been committed, shall be forfeited to His Majesty.

10. The Governor-General-in-Council may, by notification in the *Gazette of India*, declare that any of the provisions of the Sea Customs Act, 1878, relating to the levy of and exemption from customs duties, drawback of duty, warehousing, offences and penalties, confiscation, and procedure relating to offences and appeals shall, with such modifications and alterations as he may consider necessary or desirable to adapt them to the circumstances, be applicable in regard to like matters in respect of the duty on sugar imposed by section 3.

11. (1) The Governor-General-in-Council may, by notification, in the *Gazette of India*, make rules to carry into effect the purposes and objects of this Act.

(2) In particular, and without prejudice to the generality of the foregoing power, such rules may---

- (a) provide for the assessment and collection of the duty and the authorities by whom functions under this Act are to be discharged, the issue of notices requiring payment, the manner in which the duty shall be payable and the recovery of arrears;
- (b) regulate the issue of sugar out of or the use of sugar in the manufacture of commodities within any factory and provide for the appointment of officers of Government to supervise within any factory such issue or use;
- (c) impose on the owners of factories, and on persons engaged in the sale of sugar, the duty of furnishing information, keeping records and making returns and prescribe the nature of such information and the form of such records and returns, the particulars to be contained therein, and the manner in which they shall be verified;
- (d) provide for the detention of sugar for the purpose of exacting the duty, the confiscation otherwise than under section 9 of sugar in respect of which breaches of the Act or rules have been committed, and the disposal of sugar so detained or confiscated;
- (e) authorize and regulate the inspection or search of any place or conveyance used for the manufacture, storage or carriage of sugar; and
- (f) authorize and regulate the composition of offences against or liabilities incurred under the Act and rules.

(3) In making any rule under this section the Governor-General-in-Council may provide that a breach of the rule shall, where no other penalty is provided by this Act, be punishable with fine not exceeding two thousand rupees.

(4) The Governor-General-in-Council may delegate all or any of his powers under this section to a Local Government.

Extract of important Articles from the Text of the International Sugar Agreement* to which India has become a signatory and by which she has been prohibited from exporting sugar by sea elsewhere than to Burma (for a period of five years) up to 31st May, 1912,

(Full Text of the Agreement in 1937 Annual)

ARTICLE 16.

(a) The Government of India undertakes to prohibit exports of sugar by sea elsewhere than to Burma during the period of the present Agreement.

(b) In the event of re-export of Indian sugar by sea from Burma rendering the Government of India's contribution to the present Agreement ineffective, the Government of India will take up the matter with the Government of Burma with a view to reaching agreements which will render the Government of India's contribution effective.

ARTICLE 50

(a) Subject to the provisions of Article 51, the present Agreement shall remain in force for a period of five years from the date of its entry into force and shall not be subject to denunciation.

Prohibition of Export of sugar from British India by sea.*

Customs. New Delhi, the 1st January, 1938.

No. 1.—In exercise of the powers conferred by section 19 of the Sea Customs Act, 1878 (VIII of 1878), the Central Government is pleased to prohibit the taking by sea out of British India of sugar in

*The Government of India, with the permission of the International sugar council, allowed an export of 200,000 tons of sugar to the United Kingdom in 1940, but the proposal did not materialise.

any of its commercial forms, except the product sold as final molasses:—

Provided that nothing in this notification shall be deemed to apply to—

- (a) sugar manufactured outside India, and
- (b) sugar exported to Burma or to a State in India.

Exemption of Jaggery from prohibition of export.

Copy of the Instruction dated the 14th February, 1938.

For purposes of Notification 1 Customs, dated 1st January, 1938, cane and palmyrah jaggery may be treated as final molasses and no objection raised to its export from India to normal destinations.

Prohibition of issue of Sugar on eve of the Budget.

A notification was issued by the Government of India Finance Deptt. on 28th December, 1940, whereby "on sugar shall be issued out of a factory or used within a factory in the manufacture of any Commodity other than sugar, after 5 p.m. on the day appointed for the presentation of the annual or supplementary budget of the Central Government to the Chambers of the Indian Legislature".

The Northern India Sugar (Excise Duty) order, 1938, has also been amended accordingly.

The Indian Sugar Industry & Present Protection*

Relevant in this connection are:—

- (1) Summary of Recommendations of the Tariff Board. (A comparison with the forecast made by us of these recommendations in the 1938 Annual, *vide* page lxxxiv—lxxxvi will show that we were substantially correct in respect of all important recommendations. (*Vide* 1939 Annual, p. 14).
- (2) Extracts from the Hon'ble Finance Member's speech in introducing the Budget of the Government of India for 1939-40 in the Central Legislative Assembly on the 28th February, 1939) (*Vide* 1939 Annual, p. 23).
- (3) Important *communiqués* of the Governments of the U. P. and Bihar (At the end of "Sugar Industry at a Glance").
- (4) Speeches of the Hon'ble Dewan Bahadur Sir A. Ramaswami Mudaliar, Commerce Member of the Government of India at the Sugar Conference held in Simla on the 14th June, 1940 and of Mr. P. M. Kharegat, C.I.E., I.C.S., Vice-Chairman of the Imperial Council of Agricultural Research at the Sugar Committee of the Council held in Simla on June 17th, 1940 (In the succeeding pages.)
- (5) The *personnel* of the U. P. and Bihar Sugar Control Board and of the U.P. and Bihar Sugar Commission. (Page 10)

GANDHI & CO. (Publishers).

31st December, 1940.

*A fresh Tariff Board inquiry was to have been conducted during 1940, to decide about the quantum of protection after 31st March, 1941, upto 31st March, 1946, but in accordance with our recommendations made in our 1939 Annual, not to undertake the enquiry in the abnormal circumstances created by the war, we are glad to say, that the Government of India announced in September, 1940, that no enquiry will be undertaken.

We expect that the Government of India will introduce a bill in the Central Legislatures in March, 1941, and continue the present protective import duty on sugar till 31st March, 1946.

U. P. Government and Bihar Government

Sugar Control Board (1940-41).

The term of appointment of the Inter-Provincial Sugar Control Board of the U. P. and Bihar having expired, the Governors of both the Provinces have reconstituted the Board for a further period of one year with effect from July 1, 1940, and nominated the following persons to be members of the reconstituted Board:—

The Adviser to His Excellency the Governor, United Provinces, Revenue; The Adviser to His Excellency the Governor of Bihar, Development; Mr. Bepin Behari Varma, Motihari, Bihar; Mr. Dip Narayan Sinha, M.L.A., (Bihar); Lala Har Sahai Gupta, M.L.C., (United Provinces); Thakur Phool Singh, M.L.A., (United Provinces); Prof. Shibban Lal Saxena, M.L.A., (United Provinces); Mr. N. A. Shervani, Shri Krishna Deshi Sugar Works Ltd., Jhusi, (Allahabad); Mr. D. R. Narang, M.L.C., Basti Sugar Mills Ltd., Basti; Mr. D. P. Khaitan, 8, Royal Exchange Place, Calcutta; Mr. C. O'Malley, Begg Sutherland & Co., Ltd., Cawnpore; Mr. Gurusharan Lal, Gaya Sugar Mills Ltd., Bihar; Mr. Maneklall H. Parikh, B.A. Cawnpore Sugar Merchants' Association, Cawnpore; The Secretary to the Government of Bihar in the Development and Employment Department; The Secretary to the Government of United Provinces in the Industries Department.

The Advisor to His Excellency the Governor, United Provinces, Revenue, will be the *ex-officio* Chairman of the Board, and the Secretary to the Government of United Provinces in the Industries Department to be the *ex-officio* Secretary, so far as the U. P. Board is concerned. As regards the Bihar Board the Adviser in charge of the Development Department will be *ex-officio* chairman of the Board and the Secretary of the Education, Development and Employment Department the *ex-officio* Secretary.

U. P. & Bihar Sugar Commission

In August, 1940, the U. P. and Bihar Government set up a "Sugar Commission, which would be the final authority, subject to Government control, on all matters connected with the production and sale of sugar, as well as other matters regarding cane prices etc."

The Chairman of the Commission is Mr. J. E. Pedley, C.I.E., M.C., I.C.S., and the Cane-Commissioners of U. P. and Bihar are *ex-officio* members of the Commission. They are *ex-officio* members of the Board of Directors of the Indian Sugar Syndicate. The office of the Sugar Commission is at Cawnpore.

N. B.—To Remain in force until the 30th June, 1944

TEXT OF

The United Provinces Sugar Factories Control Act, 1938*

(Act No. I of 1938)

(As amended by the U. P. Sugar Factories Control Amendment Act), 1939,** November 1940 and January 1941***

AND OF

The Bihar Sugar Factories Control Act, 1937†

(Bihar Act VII of 1937)

(As amendment by the Bihar Sugar Factories Control Act), November 1940, of January 1941***

As Published in

The U. P. Gazette (Extraordinary)

*Dated 11th February, 1938, and 15th July, 1939 and
November, 1940, and 16th January, 1941*

The Bihar Gazette (Extraordinary)

*Dated 24th December, 1937 and November, 1940,
and 16th January, 1941*

Extracts of important Rules from The Bihar as well as the U. P. Sugar Factories Control Rules, 1938, as amended up to February, 1941 and the *personnel* of the U. P. and Bihar Sugar Control Board for 1940-41, and of the Sugar Commission of U. P. and Bihar are also given. (See page 10)

N. B.—The texts of these Acts in the U. P. & Bihar being very nearly the same except for verbal changes here and there, we are giving the text of the amended U. P. Act only (it is also the text of the Bihar Act), and wherever there is any difference in the wording of the Bihar Act, we have underlined the text of the U. P. Act and have given the exact wording of the Bihar Act in the Footnote at the appropriate place on every page. Thus the reader will be able to see at once the exact text of the U. P. Act as well as of the Bihar Act, and at the same time will be able to compare the provisions of both, conveniently.

*Received assent of the Governor of U. P. on 10th February, 1938.

**Received assent of the Governor of U. P. on 29th June, 1939.

†Received assent of the Governor of Bihar on 22 December, 1937.

***Received assent of the Governor, in November, 1940, and January, 1941.

TEXT OF

The United Provinces Sugar Factories
Control Act, 1938
(AS AMENDED UPTO January, 1941)

AND

The Bihar Sugar Factories Control Act, 1937
(AS AMENDED UPTO January, 1941)

AN ACT

TO PROVIDE FOR THE LICENSING OF SUGAR FACTORIES AND TO REGU-
LATE THE SUPPLY AND THE PRICE OF SUGARCANE INTENDED FOR
USE IN SUCH FACTORIES

WHEREAS it is expedient to provide for the licensing of sugar
factories and for regulating the supply of sugarcane intended for use
in such factories and the price at which it may be purchased, and for
such other matters as may be incidental thereto;

It is hereby enacted as follows:—

CHAPTER I.

PRELIMINARY

1. (1) This Act may be called the United Provinces Sugar
1 Short title and Factories Control Act, 1938
commencement
- (2) It extends to the whole of the United Provinces
- 2 (3) This Act shall come into force at once and shall remain
in force until the 30th June, 1944.

2. In this Act unless there is anything repugnant in the subject
Definitions or context;—

- (a) "advisory committee" means a committee established under
section 3;
- (b) "assigned area" means an area assigned to a factory under
sub-section (1) of section 19;
- (c) "Board" means the Sugar Control Board established under
section 4;
- (d) "cane" means sugarcane intended for use in a factory;

Changes found in the Bihar Act given below:—

1. Substitute "The Bihar Sugar Factories Control Act, 1937,"
2. Substitute "Bihar."

- (e) "Cane Commissioner" means the officer appointed to be Cane Commissioner under section 7;
- (f) "cane-grower" means a person who cultivates cane either by himself or by members of his family or by hired labour and who is not a member of a Cane-growers' Co-operative Society;
- (g) "Cane-growers' Co-operative Society" means a society registered under the Co-operative Societies Act, 1912 (Act II of 1912), one of the objects of which is to sell cane grown by its members;
- (h) "Collector" in any provision of this Act includes any officer whom the Governor may, by notification, appoint to exercise and perform the powers and duties of a Collector under that provision;
- (i) "crushing season" means the period beginning on the 1st October in any year and ending on the 30th June next following;
- (j) "factory" means any premises, including the precincts thereof, wherein twenty or more workers are working or were working on any day of the preceding twelve months and in any part of which any manufacturing process connected with the production of sugar by means of vacuum pans is being carried on, or is ordinarily carried on, with the aid of power;
- (k) "occupier of a factory" means the person who has ultimate control over the affairs of a factory;
Provided that where the affairs of a factory are entrusted to a managing agent, such agent shall be deemed to be the occupier of the factory;
- (l) "prescribed" means prescribed by rules;
- (m) "purchasing agent" means a person licensed under this Act to act as a purchasing agent;
- (n) "reserved area" means an area specified in an order issued under section 15;
- (o) "rule" means a rule made under this Act;
- (p) "sugar" means any forms of sugar containing more than ninety per cent. of sucrose;

Changes found in the Bihar Act given below:—

3. Substitute "Bihar and Orissa Co-operative Societies Act, 1935."

- 3A (p1) "Sugar Commission" means the Commission established under Section 6 B; and
- (p2) "Sugar Commissioner" means the Officer appointed to be Sugar Commissioner under section 6A.

CHAPTER II.

CONSTITUTION OF ADVISORY COMMITTEES, THE SUGAR CONTROL BOARD AND OTHER AUTHORITIES.

- 4 3. The Governor may, by notification, establish an advisory committee for the province or for any area specified in such notification.

- 5 4. There shall be established for the United Provinces a Sugar Control Board.

5. The Board and each advisory committee shall be constituted in the prescribed manner.
- Constitution of Board and advisory committee

6. (1) The Board and every advisory committee shall exercise Power and duties of advisory committees and Board and perform, in addition to any powers or duties conferred or imposed on them by the provisions of this Act, such powers and duties as may be prescribed.

- (2) The business of the Board and of every advisory committee shall be conducted in such manner and in accordance with such procedure as may be prescribed.

- 5(a) 6A. The *Provincial Government* may, by notification, appoint any officer to be Sugar Commissioner to exercise and perform such powers and duties as may be prescribed.
- Appointment of Sugar Commissioner

- 5(b) 6B. (1) The *Provincial Government* may, by notification, establish a Sugar Commission for the *United Provinces*.
- Sugar Commission

Changes found in the Bihar Act given below:—

- 3A (Clauses (p1) and (p2) in the Bihar Act are Known as Clauses (q) and (r).

4. After the words *the province*, add "of Bihar."

5. Substitute "The Province of Bihar."

- 5(a) For "Provincial Government" read "Governor" in the Bihar Act.

- 5(b) For The Provincial Government, "read" "The Governor" and for "the United Provinces" read "the Province of Bihar" in the Bihar Act.

(2) The Sugar Commission shall consist of the Sugar Commissioner, who shall be the Chairman of the said Commission, and such and so many members, being servants of the Crown in India, as may be prescribed.

(3) The Sugar Commission shall exercise and perform such powers and duties as may be prescribed and its business shall be conducted in such manner and in accordance with such procedure as may be prescribed.

7. The Governor may, by notification, appoint any officer to be Cane Commissioner, to exercise and perform, in addition to the powers and duties conferred and imposed on him by this Act, such powers and duties as may be prescribed from time to time.

5(c)

6

8. (1) The Governor may, by notification, appoint such persons this Act within such local limits as he may assign as he thinks fit to be inspectors for the purposes of to them respectively.

(2) No person shall be appointed to be an inspector under subsection (1) or, having been so appointed, shall continue to hold office, who is or becomes directly or indirectly interested in a factory or in any process or business carried on therein or in any patent or machinery connected therewith.

(3) The Provincial Government may by rules provide for the appointment of such servants of the Crown as it thinks fit to be *ex-officio* or additional inspectors for the purposes of this Act within such local limits as it may assign to them respectively.

(4) Every inspector shall be deemed to be a public servant within the meaning of the Indian Penal Code and shall be officially subordinate to such authority as the Provincial Government may specify in this behalf.

(5) The Provincial Government may by rules provide for the powers to be exercised and the functions to be performed by an inspector.

5(c) In the Bihar Act add the following additional clauses after (3):
 "(4) The business of the Sugar Commission shall be conducted in such manner and in accordance with such procedure as may be prescribed".

6. Delete these words in the Bihar Act.

CHAPTER III.

LICENSING OF FACTORIES.

9. (1) No person shall commence the construction of any building intended to be used as a factory or any extension of the plant of an existing factory which is likely to increase its capacity for crushing cane unless he has been granted a licence by the Provincial Government. An application for a licence under this sub-section shall be made to the Provincial Government in the prescribed form.

(2) The Provincial Government shall prescribe the conditions on, and the circumstances in which, licences will be granted under sub-section (1).

(3) The Provincial Government shall publish a notice of the receipt of any application under sub-section (1) in the Gazette, and such notice shall specify a date on or after which the application will be taken into consideration.

(4) The Provincial Government may, after consulting the Board with regard to the application and the objections received thereto, grant the licence applied for or reject the application, as it thinks fit.

(5) A licence granted under sub-section (4) shall be valid for such period as may be specified therein but may be renewed by the Provincial Government from time to time.

10. (1) After such date as the Governor may by notification specify in this behalf, no cane shall be crushed in a factory unless the occupier thereof has obtained a licence authorizing him to crush cane.

(2) An application for such licence shall be made to the Provincial Government in the prescribed form.

6A (3) On receipt of such application, a licence shall be granted *If the applicant is the occupier of a factory which was in existence on February 10, 1938, or at which cane was crushed for at least 30 days in any crushing season during the five years previous thereto and in which sugar was manufactured direct from cane, or is a person to whom a licence has been granted under section 9.*

Changes found in the Bihar Act given below:—

6A. Substitute; after the word granted, and drop the next paragraph in *Italics* in the Bihar Act.

Provided that the Provincial Government may refuse to grant a licence in any other case or to any person, if it has already cancelled or refused to renew, a licence previously granted to such person. 6B

Provided further that the Provincial Government may refuse to grant a licence to any person in respect of a particular factory, if no application was made to renew for the preceding crushing season the licence previously granted in respect of such factory. 6C

(4) A licence under this section shall be valid till the 31st October next following and shall be renewable in the prescribed manner. 7 8

(5) If an occupier of a factory has committed a breach of the conditions of his licence for which penalties have been imposed, the Provincial Government may, after consulting the Board refuse to renew his licence.

11. A licence granted under sub-section (3) of section 10 shall be subject to such conditions as the Provincial Government may, after consulting the Board, impose in respect of all or any of the following matters at the time when the licence is granted:—

(a) membership of any organisation of the sugar industry the main object of which is to regulate the sale of sugar and which is recognised by the Provincial Government;

(b) the price below or above which, the terms on which, and the persons to whom or organisations to which or through whose agency, any variety, grade or quantity of sugar produced in the factory may be sold; 9

(c) the manner in which sugar produced in the factory shall be graded, marked, packed or stored for sale;

(d) the quantity of the cane that shall be crushed during the crushing season, or the quantity of sugar that shall be manufactured during the period of the licence; 10

Changes found in the Bihar Act given below:—

6B. Drop the words "In any other case or" in the Bihar Act and add (a) before "to any person."

6C. For the underlined words substitute (b) before to any person.

7. Substitute: A license granted under sub-section (3).

8. After the words *next following*, add: the date on which it is granted.

9. Instead of the words "to which or through whose agency," substitute "to or through the agency of whom."

10. In the Bihar Act delete "that," and substitute "which" for "that" in two places.

- (e) such other matters as may be prescribed, including conditions of labour.

11

IIA. Notwithstanding anything contained in section 11 or in any license granted under Section 10, the Provincial Government may, after consulting the Sugar Commission, from time to time, by notification, fix the price at, below or above which, the terms on which and the persons or organizations to, or through the agency of whom all varieties or grades, or any variety, grade or quantity of sugar produced in a factory may be sold and the manner in which such sugar or any variety thereof shall be graded, marked, packed or stored for sale.

12. The Provincial Government may levy such fee not exceeding one hundred rupees, as may be prescribed for a licence granted under section 9 or section 10.

13. (1) Before any factory commences to crush cane, the occupier shall send to the Collector a notice in the prescribed form appointing a person to be manager of the factory for the purposes of this Act and the rules made thereunder.

12

(2) The Collector may require any person appointed as manager under sub-section (1) to deposit as security an amount not exceeding rupees one thousand in each or Government Promissory Notes, and no person shall be deemed to have been appointed as manager until such deposit is made.

(3) Whenever another person is appointed as manager, the occupier shall send to the Collector a written notice of the change within fourteen days from the date on which the new manager assumes charge.

(4) During any period for which no person has been designated as manager of a factory under this section, or during which the person designated does not manage the factory, or has not made the requisite deposit, any person found acting as manager, or if no such person is found, the occupier himself, shall be deemed to be the manager of the factory for the purposes of this Act and the rules.

Changes found in the Bihar Act given below:—

11. Drop the words "including conditions of labour" in the Bihar Act, and substitute a full-stop for the comma after the word *prescribed*.

12. Drop the words "made thereunder" in the Bihar Act and add a full-stop after the word "rules".

CHAPTER IV.

PURCHASE OF CANE.

14. (1) The Provincial Government may by order require the occupier of any factory to submit to the Cane Commissioner, on or before the prescribed date, an estimate, in the prescribed form and manner of the quantity of cane which will be required in the factory during such crushing season as may be specified in the order.

(2) The Cane Commissioner shall examine every such estimate and shall publish the same in the prescribed manner with such modifications, if any, as he may think fit to make therein after consultation with the advisory committee within whose jurisdiction the factory is situated.

(3) An estimate published under sub-section (2) may be revised by the prescribed authority.

15. (1) The Cane Commissioner may, after consulting the advisory committee or committees, if any, of the area concerned and the occupier of the factory and after considering any objections that may be raised, issue an order declaring any area to be a reserved area for the purposes of the supply of cane to a particular factory during a particular crushing season or seasons, and may likewise at any time cancel such order or alter the boundaries of an area so reserved:

12B

Provided that in the case of a factory situated outside the United Provinces, such declaration shall only be made on receipt by the Cane Commissioner of an application to that effect in the form prescribed from the occupier of such factory and on the condition that the occupier establishes a branch office in the United Provinces, deposits

13

Changes found in the Bihar Act given below:—

12B Drop the word: "Crushing" in the Bihar Act.

13. Substitute the following in the Bihar Act:

Provided that in the case of a factory situated outside the province of Bihar such declaration shall only be made on receipt by the Cane Commissioner of an application in the prescribed form from the occupier of such factory requesting that an area shall be reserved for the supply of cane to such factory, and on the condition that such occupier establishes a branch office in the province of Bihar, deposits a security of five thousand rupees with a Collector in the province of Bihar and appoints a person resident in the province of Bihar as his manager for the province of Bihar.

a security of Rs. 5,000 with a Collector in the United Provinces and appoints a person resident in the United Provinces as his manager for the United Provinces.

(2) An appeal shall lie against the order of the Cane Commissioner under sub-section (1) to the prescribed authority.

16. (1) The Provincial Government may order a survey to be Survey of reserved made of the area proposed to be reserved for or area assigned to a factory under section 15 and 19, and may recover the cost of such survey from the occupier of such factory.

(2) Every survey mentioned in sub-section (1) shall be made by an officer appointed by the Provincial Government for this purpose, and the said officer shall exercise and perform such powers and duties in making such survey as may be prescribed, and the survey shall be made in accordance with the prescribed procedure.

(3) Every person owing or occupying land in any area in respect of which a survey is being made under sub-section (2) shall afford to the officer making the said survey such assistance and facilities for making the said survey as may be prescribed.

(4) Any amount due from the occupier of a factory under sub-section (1) shall be recoverable from such occupier as an arrear of land revenue.

14

17. (1) The occupier of a factory for the purposes of which an area has been reserved shall maintain a register Maintenance of Register in the prescribed form and manner of all cane-growers and Cane-growers' Co-operative Societies in such area, who offer under section 18, to sell cane to him.

(2) The Provincial Government may by rules provide for:—

- (a) the correction of entries in, and the addition of new entries to such register,
- (b) the payment of costs in connection with such correction or addition, and the manner in which such costs shall be realised, and
- (c) the supply, on payment, of copies of entries in the register.

Changes found in the Bihar Act given below:—

14. For the words "as an arrear of land revenue," substitute "as a public demand payable to the Collector," in the Bihar Act.

18. (1) A cane-grower or a Cane-growers' Co-operative Society in a reserved area may offer in the form and by the date prescribed, to supply to the occupier of the factory, for which the area is reserved, cane grown by the cane-grower or by the members of such Cane-growers' Co-operative Society as the case may be, not exceeding the quantity, if any, prescribed for such grower or Cane-growers' Co-operative Society.

(2) The occupier or manager of a factory for which an area is reserved shall enter into an agreement, in such form, by such date and on such terms and conditions as may be prescribed, to purchase the cane offered in accordance with sub-section (1):

Provided that, he shall not purchase or enter into an agreement to purchase cane from a person who is a member of a Cane-growers' Co-operative Society.

(3) Except with the permission of the Provincial Government cane grown in a reserved area shall not be purchased in such area by a purchasing agent, or by any person other than the occupier of the factory for which such area has been reserved.

15
15A

(4) Cane grown in a reserved area shall not be sold by any person other than a cane-grower or a Cane-growers' Co-operative Society.

Provided that a cane-grower or a Cane-growers' Co-operative Society may deliver cane intended for use in a factory through another cane-grower or through a carrier.

(5) During the crushing season, the Provincial Government may, if it is satisfied that there is likely to be in the area reserved for a factory any quantity of cane available for sale to the occupier of the factory in excess of the quantity for which he is required to enter into agreements, direct that cane shall not be purchased outside the reserved area until the occupier of the factory enters into agreements to purchase all the cane offered to him in the reserved area:

Provided that such prohibition shall not apply in respect of cane for the supply of which agreements in writing have been entered into before such direction was issued.

Changes found in the Bihar Act given below:—

15. For the words "Except with the permission of the Provincial Government," substitute "Unless the Provincial Government otherwise directs," in the Bihar Act.

15A. Drop these words in the Bihar Act.

19. (1) The Cane Commissioner may, after consulting the Declaration of advisory committee or committees (if any) of assigned areas after considering any objections that may be raised, and purchase of cane therein area concerned and the occupier of the factory and issue an order declaring any area to be an assigned area for the purposes of the supply of cane to a particular factory.

15B *Provided that in the case of a factory situated outside the United Provinces, such declaration shall only be made on receipt of the Cane Commissioner of an application to that effect in the form prescribed from the occupier of such factory.*

(2) Subject to the provisions of sub-section (5) the occupier of a factory for which an area has been assigned, shall enter into agreements for the purchase in the assigned area, of such quantity of cane as may be fixed by the Cane Commissioner.

(3) Such agreements shall be entered into with cane-growers in the assigned area or Cane-growers' Co-operative Societies or purchasing agents, by such date and in such form and on such terms and conditions as may be prescribed:

15C *Provided that such agreements shall not be entered into with nor cane purchased from a person who is a member of a Cane-growers' Co-operative Society.*

(4) If such an agreement is entered into with a purchasing agent, he shall enter into similar agreements with cane-growers in the assigned area or Cane-growers' Co-operative Societies in respect of all the cane which he has undertaken to supply.

(5) If the cane-growers or Cane-growers' Co-operative Societies in the assigned area are not willing to enter into agreements to supply, or fail to supply, the requisite quantity of cane, the occupier of the factory or the purchasing agent may, after giving the prescribed notice to the Collector, purchase the balance of the cane required from outside the assigned area, unless otherwise directed by the Collector.

(6) An appeal shall lie against an order of the Cane Commissioner under sub-section (1) or sub-section (2) to the prescribed authority.

15 B. Substitute para 2 as follows in the Bihar Act.

Provided that in the case of a factory situated outside the Province of Bihar such declaration shall only be made on receipt by the Cane Commissioner of an application in the prescribed form from the occupier of such factory requesting that a area shall be declared to be an assigned area for the propose of the supply of cane to such factory.

15 C. For "Cane purchased" substitute "shall cane be purchased". in the Bihar Act.

20. In any area, other than a reserved area, no person shall purchase cane except—
 Purchase of cane outside reserved area

- (a) the occupier of a factory or a person employed by him for the purpose of making such purchases.
- (b) a purchasing agent or a person employed by him for the purpose of making such purchases, or
- (c) a Cane-growers' Co-operative Society:

Provided that a person entitled to purchase cane, may take delivery thereof through a cane-grower or through a carrier.

CHAPTER V.

PRICE TO BE PAID FOR CANE.

21. (1) The Governor, after consultation with the Board, may, by notification, determine in respect of any area the minimum price to be paid by occupier of factories or purchasing agents for cane purchased in that area, or direct that such minimum price shall be calculated in accordance with rules made under this Act.

16

(2) The Governor may, after consultation with the Board, vary, by notification, the price notified sub-section (1), from time to time, as he thinks fit.

(3) The occupier of a factory or a purchasing agent shall not make any deductions from the amount due for cane sold to him by a cane-grower or Cane-growers' Co-operative Society, except such deductions as may be prescribed, or as the Governor may, by notification,, from time to time allow.

17

22. The Governor may, after consultation with the Board, by notification direct that, in addition to the minimum price to be paid for cane, the occupier of the factory shall pay for special varieties of cane to be specified in such notification and which a cane-grower or

Changes found in the Bihar Act given below:—

16. Drop the words "made under this Act" in the Bihar Act, and add a full-stop after the word rules.

17. Drop the words, "or as the Governor may, by notification, from time to time allow," in the Bihar Act, and Substitute a full-stop for the comma after the word *prescribed*.

Cane-growers' Co-operative Society has agreed to supply to him, such additional price as the Provincial Government may direct.

22A. The Provincial Government may, after taking into consideration the prices obtained for sugar manufactured in a particular season, by notification direct that, in addition to the minimum price to be paid under section 21, the occupier of the factory shall pay to the cane grower or to the Cane Grower's Co-operative Society, as the case may be, such additional price in accordance with a scale as the Provincial Government may, after consulting the Sugar Commission, fix.

Power of the Provincial Government to vary the minimum price in certain cases

CHAPTER VI.

MISCELLANEOUS.

23. (1) No person shall exercise any of the powers conferred by or under this Act on a purchasing agent unless he has been licensed in the prescribed manner.

Licensing of purchasing agents etc.

(2) The Governor may, by notification, direct that in any area no person shall be employed by an occupier of a factory or by a purchasing agent to do any work or class of work in connection with any transaction for the purchase of cane unless such person has been licensed in the prescribed manner.

18 (3) A licence shall not be granted to any person under subsection (1) unless such person has paid the prescribed deposit, or furnished the prescribed security in Government Bonds, and the Collector may, in accordance with rules framed by the Provincial Government, order that the deposit paid or security furnished in respect of such licence shall be forfeited to the Crown or shall not be returned before the prescribed period or that the whole or any portion of such deposit or security shall be paid to any person who has suffered any loss owing to the misconduct of the person to whom such licence was granted.

24. The occupier of a factory or any other person acting on his behalf shall not distribute seed cane of any variety to any person to be used by cane-growers

Distribution of seed cane by factories

Changes found in the Bihar Act given below:—

18. Drop the underlined words in the Bihar Act.

or the members of Cane-growers' Co-operative Societies if the Governor, after consulting the Board, has by an order published in the Gazette, declared that such variety of seed cane is unsuitable for distribution to cultivators.

25. (1) Where the occupier of a factory is a firm or other association of individuals, any one of the individual partners or members thereof may be prosecuted and punished under this Act for any offence for which the occupier of the factory is punishable:

Provided that the firm or association may give notice to the Collector that it has nominated one of its members to be the occupier of the factory for the purposes of this Act, and such individual shall be deemed to be the occupier for the purposes of this Act until further notice cancelling his nomination is received by the Collector or until he ceases to be a partner or member of the firm or association.

(2) Where occupier of a factory is a company, any one of the directors thereof, or, in the case of a private company, any one of the share-holders thereof, may be prosecuted and punished under this Act for any offence for which the occupier of the factory is punishable:

Provided that the company may give notice to the Collector that it has nominated a director, or, in the case of a private company, a share-holder, to be the occupier of the factory for the purposes of this Act and such director or share-holder shall be deemed to be the occupier of the factory for the purposes of this Act, until further notice cancelling his nomination is received by the Collector or until he ceases to be a director or share-holder.

26. (1) If the Provincial Government is satisfied, on the report of the Sugar Commission, that there has been a breach of a condition or conditions of license granted under section 10, or of any direction contained in a notification issued under section 11A, it may impose on the occupier of the factory concerned, such penalty as it may consider reasonable.

In case the breach consists of a failure to produce or sell sugar in accordance with the conditions of the license or to sell sugar in accordance with a direction contained in a notification issued under section 11-A, the penalty may extend to an amount calculated at Three Rupees per maund of sugar produced or sold in contravention of such conditions or sold in contravention of any such direction.

In case the breach consists of a failure to crush the quantity of cane specified in the license, the penalty may extend to an amount calculated at annas two for each maund by which the cane crushed exceeds or falls short of the specified quantity.

In all other cases of a breach of a condition or conditions of the license or of a direction contained in a notification issued under section 11-A, the penalty shall not exceed the sum of five thousand rupees. The Provincial Government may also, in case of a breach of any condition or conditions of a license, after consulting the Sugar Commission, cancel the license.

27. (1) If any person commences the construction of a new factory or if the occupier of a factory makes any extension of the plant of the factory, in contravention of the provisions of sub-section (1) of section 9, he shall be punishable with fine which may extend to five thousand rupees.

(2) *If cane is crushed at a factory without a licence having been obtained for the same under section 10 the occupier of the factory shall be punishable with fine which may extend to five hundred rupees for each day on which cane is crushed at the factory without such licence, and the court may order that the factory shall cease crushing cane till a licence for the same has been granted. If the order of the Court to stop the crushing of cane is not complied with, the occupier or manager of the factory or both may be sentenced to imprisonment which may extend to six months.*

(3) If the occupier or manager of a factory—

(a) intentionally fails to maintain correctly the register mentioned in sub-section (1) of section 17, or

(b) intentionally fails to enter into agreements as required by sub-section (2) of section 18 or sub-section (2) of section 19, or

(c) intentionally and persistently fails to purchase cane in accordance with the terms of an agreement entered into

Changes found in the Bihar Act given below:—

19. Substitute sub-section 2 of section 27 in Italics, by the following paragraph in the Bihar Act.

(2) If the occupier of a factory crushes cane without obtaining a licence under section 10, he shall be punishable with fine which may extend to five hundred rupees for each day on which cane is crushed at the factory without such licence.

20. Substitute (f) for (c) in the Bihar Act.

Sub-section (d), (e) and (f) will therefore be sub-section (c), (d) and (e). Sub-section (c) will be (f) in the Bihar Act.

under sub-section (2) of section 18 or sub-section (2) of section 19, or

(d) purchases cane outside a reserved area in contravention of the provisions of sub-section (5) of section 18, or **21**

(e) knowingly purchase cane from or enters into an agreement with a cane-grower who is a member of a Cane-growers' Co-operative Society in contravention of the provisos to sub-section (2) of section 18 or sub-section (3) of section 24. **22**

(f) distributes seed in contravention of section 24, he shall be punishable with fine which may extend to two thousand rupees. **23**

(4) If a purchasing agent fails to enter into agreements as required by sub-section (4) of section 19, he shall be punishable with fine which may extend to two thousand rupees.

(5) If any person knowingly:

(a) pays for any cane purchased for use in a factory a price less than the minimum price or such other price as may be determined for such cane under the provisions of Chapter V, or makes any deduction from the amount due for cane sold to him in contravention of the provisions of sub-section (3) of section 21, or **24**
25

(b) purchases or sells cane in a reserved area in contravention or the provisions of sub-section (3) or (4) of section 18, or **26**

(c) exercises any of the powers conferred by or under this Act on a purchasing agent or takes part in any transaction connected with the purchase of cane in contravention of section 20, or section 23, he shall be punishable with imprisonment which may extend to six months or with fine which may extend to two thousand rupees or with both.

Changes found in the Bihar Act given belows:—

21. Substitute (c) for (d) in the Bihar Act.

22. Substitute (d) for (e) in the Bihar Act.

23. Substitute (e) for (f) in the Bihar Act.

24. Drop the word "knowingly" in the Bihar Act.

25. For the words "for any cane purchased for use in a factory" substitute the words "for cane" in the Bihar Act.

26. Transpose sub-section (b) as sub-section (a), and sub-section (a) as (b) in the Bihar Act.

(6) Any person contravening any of the provisions of the Act for which no penalty is otherwise provided, shall be punishable with fine which may extend to two thousand rupees.

27A. (1) *No suit, prosecution or other legal proceeding shall lie against the Provincial Government or against any person for anything which is in good faith done or intended to be done under this Act or the rules framed thereunder.*

(2) *The exercise of any discretion or authority conferred on the Provincial Government or the Sugar Commission or the Sugar Commissioner or the Cane Commissioner by this Act shall not be questioned in any Civil Court.*

27. (1) No prosecution shall be instituted under this Act except upon complaint made by or under authority from the District Magistrate.

(2) On the application of a person accused of an offence under this Act, the District Magistrate may compound such offence by levying a composition fine not exceeding the fine which could be imposed for such offence at any stage before conviction.

(3) No Court inferior to that of a Magistrate of the second class shall try any offence against this Act or any order or rule made thereunder.

28. (1) The Governor may, after consulting the Board, by notification, impose a tax on the sale of sugarcane at a rate not exceeding six pies per maund or at a rate not exceeding 10 per cent. of the sale price, and may, by notification, exempt from such tax sales in any area, or any class or classes of such sales, to be specified in the notification.

29. (2) The Governor may, after consulting the Board, by notification, impose a cess not exceeding twelve pies a maund on the entry of sugarcane into a local area, specified in such notification, for consumption, use or sale therein :

Changes found in the Bihar Act given below:—

27. For the words "District Matgistrate" substitute the words "Cane Commissioner" in the Bihar Act in sub-sections (1) and (2).

28. For the words "on the sale of sugarcane at a rate not exceeding six pies per maund or at a rate not exceeding 10 per cent. of the sale price" substitute "not exceeding six pies a maund on the sale of sugarcane" in the Bihar Act.

29. Drop the words "after consulting the Board," in the Bihar Act.

Provided that such cess shall not be imposed on the entry into any such area of any sugarcane in respect of the sale of which a tax imposed under sub-section (1) is payable.

Provided further that the Provincial Government may, by notification, remit in whole or in part such cess in respect of sugar-cane used or intended to be used in a factory for any purpose specified in such notification.

(3) The Provincial Government shall make rules specifying the authority empowered to collect the tax or cess and the person from whom, and the manner in which, the tax or cess shall be collected.

(4) If any agreement for the sale of cane is entered into before the imposition of a tax or cess under this section, the seller will be entitled to recover from the buyer in addition to, and as a part of, the contracted price, the amount of such tax or cess to which the seller may be liable. 30

(5) All sums payable in accordance with sub-sections (1) or (2) or the rules made under sub-section (3) shall be recoverable as an arrear of land revenue. 30

30. (1) The Provincial Government may make rules to carry out the provisions of this Act.
Power to make rules

(2) In particular and without prejudice to the generality of the foregoing power, such rules may provide for:—

(a) the constitution, powers, duties and procedure of advisory committees and the Board;

(a1) the powers and duties of Cane and Sugar Commissioners; 30A

(a2) the class number of servants of the Crown to be appointed as members of the Sugar Commission and the powers, duties and procedure of the Sugar Commission;

(b) the authorities by which any functions under this Act or the rules made thereunder are to be performed; 31

Changes found in the Bihar Act given below:—

30. Drop Sub-section (4) and (5) from the Bihar Act.

30A. For (a1) substitute the following in the Bihar Act.

"the powers and duties of the Cane Commissioner and the Sugar Commissioner."

31

(c) the form and manner in which applications may be made for a licence to commence the construction of a new factory or the extension of the plant of an existing factory, the conditions on which and the circumstances in which such licence may be granted;

(d) the form and manner in which applications for licences for crushing cane may be made, the terms and conditions of such licences, their renewal, suspension and cancellation and the fees to be charged for the same;

(e) the form in which the notices required by sections 13(1) and 19(5) should be given;

31
contd

(f) the amount of the deposits referred to in sections 13 and 13 and the terms and conditions on which, and the procedure by which the same may be made, retained or withdrawn;

(g) the date by which, and the form and manner in which the estimate mentioned in section 14 should be submitted and the manner in which and the places at which such estimate shall be published.

Changes found in the Bihar Act given below:—

31. For sub-section (c) up to (w) substitute for following sub-sections (c) up to (t), in the Bihar Act.

(c) the form and manner in which applications may be made for a licence to commence the construction of a new factory or the extension of the plant of an existing factory, the conditions on which and the circumstances in which such licence may be granted.

(d) deleted from the Act.

(e) the form and manner in which applications for licences for factories may be made, the conditions for such licences and the levy of fees in connexion therewith, and the renewal, and cancellation of such licences.

(f) the terms and conditions on which, and the procedure by which, the deposits referred to in sections 13 and 23 may be made, retained or withdrawn.

(g) the date, form and manner for the submission of the estimate mentioned in section 14, and the manner in which and the places at which such estimate shall be published.

After 30(g) add (g1) in the Bihar Act. (g1) the form in which an application may be made by the occupier of a factory situated outside the province of Bihar requesting that an area shall be declared to be an assigned area for the purpose of the supply of cane to such factory.

- (h) the procedure to be followed in making a survey under section 16 the manner of calculating the cost of such survey, the amount to be deposited in connection therewith, and the assistance to be afforded by owners and occupiers of land to the officer making such survey ;
- (i) the form of the application in which a person offer to sell cane, the date by which such application should be made and the quantity of such cane which may be offered for such sale ;
- (j) the form of the agreement to be entered into for the purchase of cane, the date by which such agreement should be made and the terms and conditions thereof ;
- (k) the quantity of cane to be purchased in a reserved area or in an assigned area by the occupier of a factory during the crushing season for which agreements should be entered into ;
- (l) the posting of notices and the maintenance of records, registers and accounts and the submission of returns, the supply of copies of entries therein and the fees to be charged for the same ;

Changes found in the Bihar Act given below:—

(h) the procedure to be followed in making a survey under section 16 and the assistance to be afforded by owners and occupiers of land to the officer making such survey.

(f) the form of the application in which a person offers to sell cane, the date by which such application should be made and the quantity of such cane which may be offered for such sale.

(j) the form of the agreement to be entered into for the purchase of cane, the date by which such agreement should be made and the terms and conditions thereof.

(k) the quantity of cane to be purchased by the occupier of a factory during the crushing season for which agreements should be entered into in a reserved area or in an assigned area.

(l) the posting of notices and the maintenance of records, registers and accounts and the submission of returns, the supply of copies of entries therein and the fees to be charged for the same.

- (m) the method by which the minimum price to be paid for cane under this Act shall be calculated or determined and the deductions that may be made therefrom;
- (n) the form and manner in which applications for licences under section 23 may be made, the terms and conditions of such licences, their renewal, suspension and cancellation, and the fees to be charged for the same;
- (o) deleted
- (p) the operation of Cane-growers' Co-operative Societies;
- (q) the correct weightment of cane, the provision of facilities for weightment and for checking weightments, and timings of weightments;
- (r) the payment of the price for cane;
- (s) the regulation of the supply of cane;
- (t) the provision of approach roads and parking space near factories for carts bringing cane to such factories, sheds for cart-drivers and water troughs for bullocks and other kindred matters;
- (u) the reference to the Cane Commissioner of disputes relating to the supply of cane for decision or, if he so directs, to arbitration, the mode of appointing an arbitrator or arbitrators, the procedure to be followed in proceedings before the Cane Commissioner or such arbitrator or

Changes found in the Bihar Act given below:—

- (m) the method by which the minimum price to be paid for cane under this Act shall be calculated or determined and the deductions that may be made therefrom.
- (n) the procedure, terms and conditions of licences issued under section 23 and their renewal and cancellation,
- (o) the organisation and operation of Cane-growers' Co-operative Societies,
- (p) the correct weightment of cane,
- (q) the payment of the price for cane,
- (r) the regulation of the supply of cane,
- (s) the reference to the Cane Commissioner of disputes relating to the supply of cane or, if he so directs, to arbitration, and
- (t) the authority by which, the person from whom and the manner in which a tax or cess imposed under section 29 shall be collected.

arbitrators, and the enforcement of the decisions of the
Cane Commissioner or the awards of arbitrators;

(v) the amount of the tax or cess imposed under section 29
and the authority by which the person from whom, and
the manner in which such a tax or cess shall be collected;
and

(w) the provision of sheds for carts, the proper disposal of
sullage water and the speedy disposal of damaged cane.

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contd

(3) In making any rule under sub-section (1) or (2), the Provincial Government may provide that a breach of such rule shall be punishable with fine not exceeding two thousand rupees.

(4) The rules made under this section shall come into force on
such date as may be fixed by the Provincial Government. Such rules
shall be laid before both Chambers of the Legislature whenever they
may meet after the rules have come into force, and if an amendment
of any such rule is carried in both the Chambers in the Session
following the promulgation of such rules, such rule shall be amended
accordingly.

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(5) Rules made under this section shall be published in the Government Gazette.

31. The Sugarcane Act, 1934, is hereby repealed. The rules
Repeal of the issued under the Sugarcane Act, 1934, shall continue
Sugarcane Act, in force in so far as they are not inconsistent with
1934 the provisions of this Act, and are not superseded by any rule made,
or notification issued, under this Act.

33

Changes found in the Bihar Act given below:—

32. Drop sub-section 4, and sub-section 5 in the Bihar Act.

33. Drop the underlined words in the Bihar Act, and substitute the words "until rules are made under the provisions of this Act."

**STATEMENT* OF OBJECTS AND REASONS APPENDED TO
THE SUGAR FACTORIES CONTROL BILL INTRODUCED
IN U. P. AS WELL AS IN BIHAR.**

The Indian Sugarcane Act, 1934 (XV of 1934), is not sufficiently comprehensive for dealing with the problems of the sugar industry, and it has been found necessary to replace it by a new measure which will provide for the better organization of cane supplies to sugar factories.

The Government of the United Provinces and Bihar have decided in conclusion with each other to introduce legislation on similar lines for both provinces which together account for nearly 85 per cent. of the production of sugar in India. •

2. The Bill deals only with factories worked by the vacuum pan process and its provisions relate to—

- (a) the licensing of sugar factories,
- (b) the regulation of the supply of sugarcane to factories,
- (c) the minimum price for sugarcane,
- (d) the establishment of a Sugar Control Board and Advisory Committees, and
- (e) a tax on the sale of sugarcane intended for use in factories.

3. An unsatisfactory feature of the sugar industry has been the growth of unhealthy competition which has brought down the price of sugar to a very low level. As a direct consequence the price of sugarcane has fallen to such an extent that during the last crushing season the price obtained by the cultivator hardly covered the cost of cultivation. Unless, therefore, steps are taken to regulate the production of sugar, the main object of protection to the industry will be frustrated. The Bill provides for the licensing of new factories and the extension of the plant of existing factories. It is proposed that no such license shall be granted except under certain conditions which are to be prescribed in the rules. The Bill further requires all sugar

*This was similar for the U. P. and Bihar, with the exception of one sentence in paragraph 4.

SUGAR FACTORIES CONTROL ACT—OBJECTS & REASONS 35

factories to take out a license before they commence to crush cane. This license will be granted subject to certain condition relating to the sale of sugar, membership of an organization of the industry recognised by Government and the quantity of cane to be crushed by the factory. These conditions will ensure normal working and at the same time provide effective control over the production of sugar. In order to facilitate effective supervision over production it is proposed to insist on factories becoming members of a central organization of the industry which is recognised by the Provincial Government.

4. As regards the regulation of the supply of sugarcane to factories, the Bill provides for the purchase of cane—

- (a) in an area reserved for a factory,
- (b) in an area assigned to a factory,
- (c) in areas which are neither reserved nor assigned.

In a reserved area if a cane-grower or a Cane-growers' Co-operative Society offers to sell cane to the factory for which the area has been reserved, the factory is bound to enter into agreements with such cane-grower or Cane-growers' Co-operative Society to purchase such minimum quantity of cane as may be prescribed in the rules. In other words, a cane-grower or a Cane-growers' Co-operative Society in a reserved area will be given an assurance that his or its cane will be taken by the factory in accordance with the terms and conditions of an agreement, but the factory will not be bound to enter into agreements with such cane-grower or Cane-growers' Co-operative Society for more than the prescribed quantity of sugarcane. This prescribed quantity will be determined by the area under cane cultivation with a proper system of rotation of crops. Latitude is allowed in fixing the boundary reserved.* The Bill, therefore, makes provision for a survey of reserved areas. The Bill further provides that the factory shall make direct purchases from cane-growers or Cane-growers' Co-operative Societies. Purchasing agents will not be allowed to function within a reserved area. In return for the assurance regarding the purchase of cane the Bill prohibits the purchase of cane within the reserved area by or on behalf of other factories. As in some years there may be over-production of sugarcane within

*Add the following in the Statement of objects and reasons of the Bihar Bill "It is particularly necessary in Bihar where owing to the absence of an up-to-date survey it is almost impossible to obtain reliable estimates of cane areas."

the reserved area, the Provincial Government is given power to direct that the factory shall not purchase cane outside its reserved area unless it first agrees to purchase all the cane available for sale within its reserved area. This provision will not, however, affect agreements entered into by the factory with growers outside the reserved area. The object of creating a reserved area for a factory is to encourage factories to enter into direct relations with growers and to take an interest in the development of cane cultivation within its reserved area.

5 The reservation of areas may not be immediately practicable and it may not be possible for the Provincial Government to reserve an area of adequate size for the supply of cane to each factory. Where no area can be conveniently reserved for a factory or where the area reserved is inadequate having regard to the cane requirements for the factory, it is proposed to assign areas to the factory in which it will be required to enter into agreements for the purchase of a specified quantity of sugarcane. Such agreements may be with cane-growers, Cane-growers' Co-operative Societies or licensed purchasing agents. If an agreement is entered into with a licensed purchasing agent, he must enter into agreements with cane growers or Cane-growers' Co-operative Societies in the assigned area for the full amount which he has undertaken to supply to the factory.

There are three important differences between a reserved area and an assigned area: firstly, in a reserved area a factory is bound to enter into agreements with all cane-growers or Cane-growers' Co-operative Societies, whereas in an assigned area the only obligation is to enter into agreements for a specified quantity of cane; secondly, in an assigned area, cane may be purchased through a licensed purchasing agent whereas in a reserved area cane can only be purchased direct from cane-growers or Cane-growers' Co-operative Societies; and, thirdly, in a reserved area only the factory for which the area is reserved may purchase cane whereas in an assigned area any factory or its licensed purchasing agent may purchase cane. In assigned areas and in areas which are neither reserved nor assigned cane may only be purchased by—

- (a) the occupier of a factory or any of his employees specially authorised to purchase cane,
- (b) a licensed purchasing agent or any of his employees specially authorised to purchase cane, or
- (c) a Cane-growers' Co-operative Society

SUGAR FACTORIES CONTROL ACT—OBJECTS & REASONS 37.

In order to encourage the organisation of Cane-growers' Co-operative Societies, the Bill provides that a factory shall not enter into agreements direct with the member of such Society. Area will be reserved or assigned by the Cane Commissioner subject to an appeal to the prescribed authority.

6. Chapter V of the Bill deals with the fixation of minimum price for sugarcane intended for use in a factory. As drafted, the Bill leaves a wide latitude to the Provincial Government to vary the minimum price and to prescribe rules to determine how the minimum price shall be calculated. Provision is also made for the payment of an additional price for special varieties of cane. In order that undesirable varieties may not be introduced in the province, the Bill prohibits the distribution of seed cane of such varieties.

7. The endeavour has been made as far as possible to avoid encumbering the Bill into unnecessary details. The regulation of matters of detail has therefore been left to rules. This will enable Government to meet any practical difficulties in working. For proper consultation with the industry there will be a Sugar Control Board and Advisory Committees. The former will deal with the major problems, e.g., the licensing of factories and the fixation of a minimum price, whereas the latter will deal with local problems, e.g., the determination of reserved and assigned areas, etc. A Cane Commissioner will be appointed for the administration of the Act. He will be assisted by inspectors, *ex-officio* inspectors and additional inspectors, whose duties and functions will be prescribed by the rules.

8. The penalties provided in this Bill are necessary for proper enforcement and the amounts have been kept sufficiently large so as to prevent evasions.

9. The future of the sugar industry depends to a very large extent on a big drive in the improvement of cane cultivation and its planned production on a rational basis. To enable Government to carry out the necessary measures in this connection, which will involve considerable expenditure, and to take other steps conducive of the welfare of the industry, cane-growers, and agriculturists generally, it is proposed to impose a tax up to a maximum limit of six pies a maund on the sale of sugarcane to a factory or a cess at the same rate on the entry of cane into a local area notified in this behalf for consumption, use or sale therein.

10. The proposals in this Bill are wide in scope and Government feel that the results should be carefully watched before these proposals are permanently adopted. The Bill will, therefore, remain in force only until the 30th June, 1941 by which time adequate experience will be gained of its working.

Extracts of Important Rules from
Bihar Sugar Factories Control Rules 1938
AND
U. P. Sugar Factories Control Rules 1938
(Is Amended up to February, 1941)
are given in the succeeding pages.

Addition of An Important Rule in 1941

Addition of a Rule (Rule 8B in Bihar Rules) made in February, 1941, in U. P. and Bihar Sugar Control Rules.

"The Sugar Commissioner may, subject to the control of the Provincial Government, by order, require the occupier or manager of a factory to submit to the Sugar Commissioner or to any other authority specified in such order any information or any return relating to the production, supply and crushing of cane, the manufacture of sugar, and the quantities and grades of sugar manufactured, in stock and issued and the quantities in which and the prices at which such sugar is sold."

Extracts of Important Rules from The Bihar Sugar Factories Control Rules, 1938*

(As Amended up to 10th February, 1941)

1. Short title, extent and commencement—(1) These rules may be called the Bihar Sugar Factories Control Rules, 1938.

2. They shall come into force on the 15th June, 1938.

3. Advisory Committees.—(1) When an Advisory Committee is established for any area under section 3 of the Act, the Governor shall, by notification, appoint the Chairman and the Secretary thereof. The Governor may also appoint other persons, not being growers or persons interested in factories to be members or *ex-officio* members. The Governor shall, in addition, appoint as members an equal number of representatives of growers and factories, who shall ordinarily be resident of the area in respect of which the Advisory Committee is established.

(2) It shall be the duty of each Advisory Committee—

(a) to recommend ways and means of maintaining health relations between factories and growers;

(b) to make suggestions to regulate the purchase of cane;

(c) to bring to the notice of the Collector cases of breach of any of the provisions of the Act and of the rules made thereunder;

(d) to advise the Cane Commissioner with regard to the cane estimates submitted to the Cane Commissioner under section 14 of the Act and the declaration of any proposed reserved and assigned areas under sections 15 and 19 of the Act;

(e) to advise the Divisional Commissioner or the Collector of the district on any matter which may be referred by them to the Committee for its advice; and

(f) to advise the Chairman and the Provincial Government on any matter which may be referred to the Committee for its advice.

*Rules published in the Bihar Gazette, dated the 6th July, 1938.

6. (1) The term of appointment of an Advisory Committee shall be for one year, or for such shorter period as may be prescribed by notification.

(2) When the place of a member of an Advisory Committee becomes vacant by the resignation or death of such member, the Governor may appoint a new member to fill the vacancy and such new member shall hold office for the unexpired residue of the term of office of the member in whose place he has been appointed.

7. Sugar Control Board.—(1) The Board shall consist of fifteen members.

(2) The Adviser to His Excellency the Governor of Bihar in charge of the Development Department, and the Secretary to the Government of Bihar in the said Department shall be *ex-officio* Members of the Board.

(3) The remaining members shall be nominated by the Provincial Government and shall include an equal number of representatives of factories and of cane-growers.

(4) The Board shall, in addition to the powers and duties conferred or imposed upon them by the provisions of the Act, advise the Provincial Government on all matters connected with the sugar industry of the province that may be referred to it by the Provincial Government.

(5) The Governor shall, by notification, appoint the Chairman and the Secretary of the Board.

(6) The first meeting of the Board shall be held on the date, and at the place and time appointed by the Governor.

(7) The second and all subsequent meetings of the Board shall be held at the headquarters of the province unless the Chairman otherwise directs.

(8) Notice in writing of all meetings shall be circulated by the Secretary to all members not less than two weeks before the date fixed for the meeting, provided that in urgent cases a shorter notice shall be deemed to be sufficient.

(9) The term of appointment of the Board shall be for one year from 1st July each year, provided that the term of the first Board will be till 30th June, 1939.

(10) When the place of a member nominated to the Board becomes vacant by the resignation or death of such member, the Provincial Government shall nominate a new member to fill the vacancy, subject to the provisions of sub-rule 3, and such new member shall hold office for the unexpired residue of the term of office of the member in whose place he has been nominated.

8A. The Sugar Commission shall consist of the Sugar Commissioner as Chairman, and the Cane Commissioners of Bihar and the United Provinces as members.

(2) The Sugar Commission shall advise the Provincial Government on all matters connected with the production and sale of sugar, and such other matters as may be referred to it by the Provincial Government.

(3) Subject to the control of the Provincial Government, the Sugar Commission shall be the final authority to deal with the Indian Sugar Syndicate on all matters connected with the production and sale of sugar, and such other matters as may be referred to it by the Provincial Government; provided that the Indian Sugar Syndicate shall have the right at all times to approach the Provincial Government direct.

9. Inspectors.—(1) The Cane Commissioner shall be *ex-officio* Inspector for the whole province.

(2) The Divisional Commissioner, the Collector of the district and the Sub-divisional Officer shall be *ex-officio* Inspectors within their respective jurisdictions.

All the Inspectors within a district shall be subordinate to the Collector of the district and all Inspectors within a division shall be subordinate of the Divisional Commissioner.

10. Powers of Inspectors —An Inspector may, within the local limits of his jurisdiction,—

- (a) enter any place which is, or which he has reason to believe to be, used as a factory or any place where cane is weighed or payment is made therefore, and make such examination of the weigh-bridges and of any records, registers and accounts maintained in connection with the purchase of cane;
- (b) cause carts or wagons carrying cane or consignments of cane to be weighed or re-weighed in his own presence;

Provided that cane loaded in wagons may not be required to be unloaded for the purposes of re-weighment;

- (c) record the statement of any person whom he may deem necessary to examine for the proper discharge of his duties;
- (d) call for from the occupier or manager of a factory any information relating to the production, supply and crushing of cane, the manufacture of sugar, and the quantity of sugar produced, issued and in stock;
- (e) call for from a purchasing agent, a cane-grower or a Cane-growers' Co-operative Society any information relating to the production, cultivation and supply of cane;
- (f) issue from time to time such instructions as may be necessary to ensure equitable purchase of cane; and
- (g) exercise such other powers as may be reasonably necessary for carrying out the purposes of the Act or of the rules made thereunder.

11. License for the construction of new factories.—(1) An application for a license to commence the construction of any building intended to be used as a factory shall be made in Form I to the Cane Commissioner, who shall forward it with his report to the Provincial Government. The Provincial Government shall publish a notice of the receipt of such application in the *Bihar Gazette* and such notice shall specify the date on or after which the application will be taken into consideration.

(2) The Provincial Government may consult the Sugar Control Board with regard to the application and the objections received thereto before disposing of the application.

N. B.—For the purpose of rule II any alterations to an existing building with a view to use the same as a factory shall be treated as the construction of a building intended to be used as a factory.

12. No license shall be granted for the construction of any building intended to be used as a factory unless—

- (a) The site of the proposed factory is at a distance of not less than 10 miles from any existing factory;
- (b) The quantity of cane available or likely to be available within a radius of 10 miles of the proposed site, exclud-

ing the cane in the area reserved for another factory, is not less than 60 per cent. of the estimated cane requirement shall be calculated at 120 times the daily crushing capacity of the proposed factory;

(c) The applicant undertakes to build storage accommodation for at least one-third of the estimated annual production of sugar at the factory. The annual production of sugar at the factory. The annual production of sugar shall be calculated at 9 per cent. of the estimated cane requirement as determined under clause (b) above, and

(d) The additional production of sugar is not likely to affect adversely the interests of the sugar industry;

Provided that a license for the construction of a building at a new site for a factory already existing in the province shall be granted if conditions (a), (b) and (c) above are fulfilled.

13. A license for the construction of any building intended to be used as a factory shall be granted in form III and shall be valid for one year and may be renewed by the Provincial Government from time to time until the construction of the factory is completed.

14. License for the extension of existing factories.—An application for a license for any extension of the plant of an existing factory, which is likely to increase its capacity for crushing cane, shall be made in form II to the Cane Commissioner who shall forward it with his report to the Provincial Government within one month of the receipt of the same.

15. No such application shall be granted unless *inter alia* the Provincial Government are satisfied, after consulting the Board, that the additional cane required by the factory is available or likely to be available within a radius of ten miles of the factory excluding the area reserved for any other factory.

16. A license for any extension of the plant of an existing factory, which is likely to increase its capacity for crushing cane, shall be granted in form IV and shall be valid for one year, and may be renewed by the Provincial Government from time to time until such extension is completed.

17. An application for a license for crushing cane shall be submitted to the Provincial Government in form V through the Cane Commissioner not later than eighteen months before the commencement of the crushing season for which the license is required. Provided that the Provincial Government may extend the date for the receipt of an application for crushing cane if it is satisfied that there was reasonable cause for the delay.

18. (1) A license granted under section 10(3) of the Act or renewed under section 10(4) of the Act shall be in form VII and shall be subject to the following among other conditions:—

- (a) That the factory shall be a member of the Indian Sugar Syndicate, Limited registered under the Indian Companies Act, 1913, which has been recognised by the Provincial Government under section 11 (a) of the Act ;
- (b) (i) That in the case of a factory which manufactures sugar from cane, the factory shall crush during the crushing season the quantity of cane specified in the license ;
- (ii) That in the case of a factory which manufactures sugar both from cane and from other raw materials, the factory shall manufacture during the period of the license the quantity of sugar specified in the license :

Provided that the Provincial Government may, after consulting the Sugar Commission permit the quantity of cane to be crushed or the quantity of sugar to be manufactured, as specified in the license, to be varied.

For the purposes of clause (b) the quantity of cane which shall be crushed by a factory during the crushing season and the quantity of sugar which shall be manufactured by a factory during the period of the license shall be determined after taking into consideration—

- (a) the normal cane requirement of the factory as determined according to rule 22,
- (b) the quantity of sugar to be produced by all the factories in the province during the year as determined by the Provincial Government in consultation with the Sugar Commission."

22. (1) The normal cane requirement of a factory shall be 120 times its average daily crushing capacity.

(2) The average daily crushing capacity of a factory shall be determined by the Cane Commissioner after taking into consideration—

- (a) the total quantity of cane crushed by the factory during any fifteen consecutive days in the months of January and February of the crushing season immediately preceding the date of calculation, or of the latest crushing season for which a statement has been submitted by the factory in form X ;
- (b) the total number of hours during which the factory actually crushed cane in the fifteen consecutive days mentioned in clause (a) above ;
- (c) the average quantity of cane crushed per hour and for each day of 22 hours on the basis of clauses (a) and (b) ;
- (d) any extension of the plant of the factory under section 9 of the Act since the last statement in form X was submitted by the factory.

(3) The occupier of a factory shall submit to the Cane Commissioner on or before the 1st of May each year, or when called upon to do so, an estimate in form X of the normal cane requirement of the factory based on its average daily crushing capacity. If no such statement is submitted by a factory by the 1st of May of any year, or when called upon to do so, the last statement submitted by the factory in form X shall be adopted by the Cane Commissioner as the basis for determining the cane requirement of the factory.

The Cane Commissioner shall, after examining the estimate of the normal cane requirement of the factory and after considering such provisional estimate as may be framed by the Sugar Commission of the quantity of sugar to be produced by all the factories in the Province during the ensuing crushing season or seasons, and after consulting the Advisory Committee within whose jurisdiction the factory is situated, publish the estimate of the normal cane requirement of the factory, with such modifications as he may consider necessary, and the estimate of the provisional cane requirement of the factory for the ensuing crushing season or seasons. Such estimates shall be published in the *Bihar Gazette*, in the office of the Collector of the district, in the office

of the Sub-divisional Officer in whose jurisdiction the factory is situated, and at the gate of the factory.

23. Within one month of the publication under Rule 22 of the estimate of the normal cane requirement and the estimate of the provisional cane requirement in the *Bihar Gazette*, an application for revision may be filed before the Provincial Government. Subject to the orders of the Provincial Government, the estimates of the Cane Commissioner shall form the basis for the determination of the reserved and assigned areas of the factory.

24. Declaration of reserved area.—(1) The Cane Commissioner may, after consulting the occupier of the factory and publishing a notice in the offices of the collectors and Sub-divisional Officers having jurisdiction over the area concerned and issuing copies thereof to the factories operating in such area, and after consulting the Advisory Committee or Committees, if any, of the area concerned and considering any objections that may be raised, issue an order under section 15(1) of the Act, declaring any area to be a reserved area for the purposes of supply of cane to a particular factory during the ensuing crushing season, if he is satisfied that—

- (a) *the area so reserved is not likely to supply more than 50 per cent. of the normal cane requirement of the factory or such percentage of the normal cane requirement as may be determined by the Provincial Government from time to time ;
- (b) the area so reserved is not likely to supply more than the provisional cane requirement of the factory for the crushing season or seasons in question as determined by the Cane Commissioner under rule 22 ; and
- (c) the area reserved is economically most suitable for the factory to purchase cane from.

(2) The Cane Commissioner in deciding that an area is economically most suitable for reservation for a particular factory may taken into consideration—

- (a) the distance of the factory from the area proposed to be reserved ;

*For the crushing season 1941-42, approximately 50 per cent of the normal cane requirement of a factory will be accepted as the basis for determining the reserved area of the factory, but in subsequent years this percentage will be increased in consultation with the Agricultural Department, as cultivation of cane is developed in the reserved area.

- (b) facilities for transport of cane to the factory from the area proposed to be reserved : and
- (c) whether the area has previously supplied cane to that particular factory.

(3) An order of the Cane Commissioner declaring any area to be reserved for a particular factory or altering the boundaries of an area already reserved or cancelling any previous order declaring an area to be reserved shall be published in the *Bihar Gazette*. A copy of the order shall be communicated to the factory concerned.

(4) The Provincial Government shall be the authority to which an appeal may be made against any order of the Cane Commissioner under section 15(1) of the Act, within one month of the publication of any such order in the *Bihar Gazette*.

25. Purchase of cane in a reserved area.—A cane-grower or a Cane-growers' Co-operative Society in a reserved area may offer in Form XI on or before 1st August each year to supply during the ensuing crushing season to the occupier of the factory, for which the area is reserved, cane not exceeding the quantity produced in one-third of the area of land suitable for cane cultivation, estimating the yield at a rate not exceeding 300 maunds per acre for North Bihar and 400 maunds per acre for South Bihar or at such rate or rates as the Cane Commissioner may fix in any particular year for such reserved area :

Provided that a cane-grower or a Cane-growers' Co-operative Society may offer such cane for supply to the occupier of a factory, for which an area is reserved, in Form XI on or before October 31st for the crushing seasons 1939-40 and 1940-41.

29. Declaration of assigned areas and purchase of cane therein.—

(1) The Cane Commissioner may, after consulting the Advisory Committee or Committees of the area concerned and the occupier of the factory and after considering any objections that may be raised, issue an order declaring any area to be an assigned area for the purposes of the supply of cane to a particular factory and publish such order in the *Bihar Gazette*, at the office of the Collector and at the gate of the factory.

(2) The occupier or manager of a factory, for which an area has been assigned, shall under section 19(3) of the Act, on or before

July 1st, each year or within one month of the date of publication of the order under sub-rule (1), whichever is later, enter into agreements in Form XIV or XIII A or XV, as the case may be, with cane-growers, Cane-growers' Co-operative Societies or purchasing agents for the purchase in the assigned area of such quantity of cane and in such manner as may be fixed by the Cane Commissioner:

Provided that the total quantity of cane for which the factory is required to enter into agreements with cane-growers, Cane-growers' Co-operative Societies or purchasing agents in an assigned area shall be such that this quantity together with the estimated quantity of cane available in the reserved area of the factory shall not exceed 80 per cent of the provisional cane requirement of the factory as determined under rule 19.

(3) If such an agreement is entered into with a purchasing agent, he shall under section 19(4) of the Act, on or before the 15th August each year or within ten weeks of the publication of the order under sub-rule (1), whichever is later, enter into similar agreements in form XVI with cane-growers or cane-growers' co-operative societies in the assigned area in respect of all the cane which he has undertaken to supply to the occupier of the factory.

(4) If the cane-growers or Cane-growers' Co-operative Societies in the assigned area are not willing to enter into agreements to supply, or fail to supply, the requisite quantity of cane, the occupier or manager of the factory or the purchasing agent may, after giving a fortnight's notice to the Collector having jurisdiction over the area concerned, purchase the balance of the cane required from outside the assigned area unless otherwise directed by the Collector.

(5) After the expiry of the date fixed under sub-rule (3) or after the occupier or manager of a factory is permitted under sub-rule (4) to purchase cane from outside the area assigned to the factory, the occupier or manager of any factory other than the one for which the area is assigned, may, with the previous permission of the Cane Commissioner, enter into agreements with cane-growers, Cane-growers' Co-operative Societies or purchasing agents for the purchase in the assigned area of such cane in respect of which no previous agreement has been entered into.

30. Any person aggrieved by an order of the Cane Commissioner passed under sub-rule (1) or sub-rule (2) of rule 29 may within one

* As amended upto September, 1940.

month of the date of the publication of such order in the Gazette appeal to the Provincial Government.

31. DEDUCTIONS FROM MINIMUM PRICE FIXED :—

The occupier of a factory or a purchasing agent shall not make any deductions from the amount due for cane sold to him by a cane-grower or Cane-growers' Co-operative Society, except in the following cases :—

(1) Deductions in repayment of an advance made in cash or kind for any purpose connected with the cultivation of cane within three years prior to the date of such sale.

Any deduction made on account of such an advance shall be subject to the following conditions :—

- (a) the interest charged on the advance shall not exceed 6 per cent per annum, and
- (b) the advance, together with the interest due thereon, may be deducted in not less than three equal instalments spread over the period of supply of cane during one or more crushing seasons ;

(2) Such deduction as the Provincial Government may by notification direct may be made from the price of cane purchased at a purchasing centre situated in any tract declared by the Provincial Government as a tract—

- (i) in which cane is definitely below the average of standard cane for the area on account of natural causes, *e.g.*, serious water-logging, intensive insect attack diseases or severe frost, or
- (ii) in which a specified inferior variety of cane is ordinarily or preponderatingly grown, or
- (iii) in which owing to inaccessibility or other special causes, the circumstances are such that a deduction from the minimum price would be in the interest of the growers.

40. Weighments, etc.—The manager or the purchasing agent, as the case may be, and all persons working under him shall comply with or cause to be complied with the following conditions :—

(1) All dealings and contracts in connection with the purchase and supply of cane shall be had and made according to the standard

maund of 82-2 $\frac{7}{10}$ lbs. avoirdupois and multiples or sub-multiples thereof, and all weighments shall be made by means of a weighbridge and recorded correctly to the nearest quarter maund.

(2) No scale or weights shall be used, kept or possessed by or on behalf of a manager or purchasing agent which are inaccurate and which do not permit of the easy reading of the recorded weight according to the standard maund and multiples or sub-multiples thereof to the nearest quarter maund:

Provided that margin of error up to 2 per cent. may be condoned, so far as weighments are concerned.

(3) Scales which are inaccurate or which have gave out of order shall either be removed from the weighbridge premises or sealed up or rendered incapable of use for weighing cane.

(4) No scales or weights shall be used, kept or possessed by or on behalf of a manager or purchasing agent which, in addition to readings according to the standard weight, show any alternate readings unless such alternate readings are effectively effaced by blocked out to the satisfaction of the Inspector.

(5) All scales and weights used, kept or possessed by or on behalf of the manager or purchasing agent shall be open to inspection, examination and test by the Inspector at all reasonable times without notice and shall be made available for such inspection, examination or test whenever required by him. To facilitate such inspection the manager or purchasing agent shall kept two standard weights of one maund each at each weighment centre in the custody of the person in charge of weighments.

(6) (a) No cane shall be extracted from carts for any form of charity.

(b) No deductions shall be made from the net weight of cane on the ground of dryage, improper stripping or for any other reason.

(7) The weighbridge at a factory intended for taking gross weight of cane, including the weight of cart, shall not be situated at less than 50 yards from the cane carrier.

(8) Scales, weights and readings shall be kept in full view of persons supplying cane. The readings of the scale arms should be marked in Hindi on the side facing the cart to be weighed.

(9) Weighments of cane shall not be made more than half an hour after sunset unless adequate lighting arrangements are made at the weighbridge.

(10) Adequate facilities to the satisfaction of the Collector shall be provided at all weighment centres for weighments and for regulating the entry and parking of carts to avoid congestion and undue delay in the weighment of cane brought to such centres.

(11) There shall be no detention of cane carts for more than 10 hours, without adequate cause.

(12) An occupier of a factory shall provide satisfactory roads and approaches to the weighbridges as ordered by the Collector, and all such roads and approaches shall be kept in good condition during the crushing season.

(13) Sufficient parking grounds, cattle sheds and cattle troughs shall be provided at the factory gate and at other weighment centres to the satisfaction of the Collector.

(14) Any representative of growers if authorised by the Collector shall be allowed to be present at the time of weighment of cane at any weighbridge.

41. Payments.—(1) Payment for cane shall be made within a fortnight of the date of weighment :

Provided that if the person supplying cane does not appear in person to receive payment within a fortnight of the date of weighment the payment shall be made within a week of demand subsequently made by the person supplying cane.

(2) Payments may either be made by the day or the week or in any other manner according to the convenience of the manager or purchasing agent, as the case may be. The dates, the hours and the centres at which payments will be made shall, from time to time be exhibited on a notice-board at each weighment centre throughout the cane crushing season and shall also be notified to the Inspector in whose jurisdiction the centre lies.

(3) Payments shall be made on the recorded weight of cane at the purchasing centre and no deduction shall be made by way of fine or otherwise from the calculated price by the occupier or manager of a factory or a purchasing agent, except as provided in rule 31.

(4) An occupier or manager or a purchasing agent shall be liable for all payments due for cane supplied to him or on his behalf. If a purchasing agent fails to make payments for cane purchased by him for a factory, the occupier or manager of such factory shall be responsible for making such payments.

49. Supersession of the previous rules under the Bihar Sugar Factories Control Act, 1937.—These rules shall supersede the rules published in notifications No. 34-D, dated the 4th January, 1938, and No. 220-D, dated the 27th January, 1938. All actions taken, appointments made and licenses issued under the latter rules shall be treated as issued under these rules.

Extracts of Important Rules from
U. P. Sugar Factories Control Rules, 1938

As Amended, up to February, 1941

are given in the succeeding pages.

Extracts of Important Rules From The United Provinces Sugar Factories Control Rules, 1938 *

(As amended up to 10th February, 1941)

1. These rules may be called the United Provinces Sugar Factories Control Rules, 1938, and shall take effect from the 8th October, 1938. These rules shall apply to the whole of the United Provinces.

2 A. (1) The Sugar Commission shall consist of the Sugar Commissioner and the Cane Commissioner of the United Provinces, and with the consent of the Government of Bihar, of the Cane Commissioner of Bihar.

(3) All meetings of the Sugar Commission shall be new *in camera*. The proceedings of every meeting XXX shall be confidential. No information concerning the proceedings of any meeting or of any discussion held, or decision reached at any meeting shall in disclosed, except with the consent of, or by order of, the Chairman.

3. (1) When an advisory committee is established for any area under section 3 of the Act, the Governor shall, by notification, appoint the Chairman and the Secretary thereof. The Governor may also appoint other persons, not being growers or persons interested in factories, to be members or *ex-officio* members. The Governor shall in addition, appoint as members an equal number of representatives of growers and factories, who shall ordinarily be resident of the area in respect of which the advisory committee is established.

(2) The functions of an advisory committee will be :—

(a) to recommend ways and means of maintaining healthy relations between occupiers or managers of factories, cane growers, cane growers' co-operative societies and licensed purchasing agents.

* Rules Published in the U. P. Gazette, dated 8th October, 1938.

- (b) to offer advice on any matter which may be referred to it for its advice by the Collector, the Commissioner, the Cane Commissioner, or the Provincial Government, especially in respect of the regulation of the purchase of cane and to advise the Cane Commissioner with regard to the cane estimates submitted to the Cane Commissioner under section 14 of the Act and the declaration of any proposed reserved or assigned areas under section 15 and 19 of the Act;
- (c) to bring to the notice of the Collector cases of breach of any of the provisions of the Act and of the rules made thereunder and to make suggestions for the prevention of the same.

4. (1) The sugar control Board shall consist of fifteen members.

**Sugar Control
Board**

(2) The Adviser for the time being to His Excellency the Governor of the United Provinces, in charge of the Revenue Department, and the Secretary for the time being to the Government of the United Provinces in the Industries Department shall be *ex-officio* members of the Board.

(3) The remaining members shall be nominated by the Provincial Government either by name or by virtue of their office and shall include an equal number of representatives of sugar factories and of cane growers.

(4) The Board shall in addition to the powers and duties conferred or imposed upon it by the provisions of the Act, advise the Provincial Government on all matters connected with the sugar industry of the province that may be referred to it by the provincial Government.

(5) The Governor shall by notification appoint one of the members of the Board as its Chairman and one as its Secretary.

(6) The meetings of the Board shall be held at Lucknow unless the Chairman otherwise directs, and on such dates as the Chairman may direct.

(7) Notice in writing of all meetings shall be circulated by the Secretary to all members not less than two weeks before the date

fixed for the meeting except in urgent cases, in which a meeting may be held on three days notice, which should be given by letter and telegram.

(8) The term of appointment of the Board shall be one year from the 1st July each year provided that the term of the first Board will be till 30th June, 1939.

(9) When the place of a member nominated to the Board becomes vacant by the resignation or death of such member, the Provincial Government shall nominate a new member to fill the vacancy, subject to the provisions of sub-rule 3, and such new member shall hold office for the unexpired residue of the term of office of the member in whose place he has been nominated.

4 B. The Cane Commissioner may by order establish a Supervisory Committee for the reserved area of factory or for any area specified in the order.

5. (1) The Members of the Board of Revenue and the Cane Inspectors Commissioner shall be *ex-officio* inspectors for the whole of the province. The Divisional Commissioner, the Collector of the district and the Sub-divisional Officer shall be *ex-officio* inspectors within their jurisdictions.

(2) The Governor may appoint such servants of the Crown as he thinks fit to be additional inspectors within such local limits as he may assign to them respectively.

(3) The Provincial Government may appoint such other persons as it thinks fit to be additional inspectors for land lying within an Indian State which is occupied by a railway and over which the Government of India has full and exclusive power and jurisdiction, in respect of purchase made for factories situated in such State.

9. (1) An application for a licence to commence the construction of any building intended to be used as a factory shall be made in form 1, Appendix III, to the Cane Commissioner, who shall forward it with his report to the Provincial Government. The Provincial Government shall publish a notice of the receipt of such application, in the United Provinces Gazette and such notice shall specify the date on or after which the application will be taken into consideration.

(2) Alterations to existing buildings with a view to their use as a Factory shall amount to the construction of a building intended to be used as a factory.

(3) The Provincial Government may consult the Sugar Control Board with regard to the application and the objection received thereto before disposing of the application.

(4) No licence shall be granted for the construction of any building intended to be used as a factory unless—

- (a) the site of the proposed factory is at a distance of not less than 10 miles from any existing factory or a factory for the construction of which a licence has been granted.
- (b) the quantity of cane available or likely to be available within a radius of 10 miles of the proposed site, excluding the cane in an area reserved for another factory, is not less than 60 per cent. of the estimated cane requirements of the proposed factory. The estimated cane requirements shall be calculated at 120 times the daily average crushing capacity of the proposed factory.
- (c) the applicant undertakes to build storage accommodation for at least one half of the estimated annual production of sugar at the factory. The annual production of sugar shall be calculated at 9 per cent. of the estimated cane requirements as determined under clause (b) above, and
- (d) the additional production of sugar is not likely to affect adversely the interests of the sugar industry in the provinces of Bihar and U. P.

Provided that a licence for the construction of a building at a new site for a factory already existing in the United Provinces or in Bihar shall be granted if conditions (a), (b) and (c) above are fulfilled.

(5) A licence for the construction of any building intended to be used as a factory shall be granted in form 4 Appendix III and shall be valid for one year and may be renewed by the Provincial Government from time to time until the construction of the factory is completed.

10. (1) An application for a licence for any extension of the plant of an existing factory, which is likely to increase its capacity for crushing cane, shall be

Licences for the
extension of
existing factories

made in form 2 Appendix III, to the Cane Commissioner, who shall forward it with his report to the Provincial Government within one month of the receipt of the same.

(2) No such application shall be granted unless after consulting the Board, the Provincial Government are satisfied, *inter alia*, that the additional cane required by the factory is available or likely to be available within a radius of ten miles of the factory, excluding the area reserved for any other factory.

(3) A licence granted for any extension of the plant of existing factory, which is likely to increase its capacity for crushing cane, shall be in form 5 appendix III and shall be valid for one year and may be renewed by the Provincial Government from time to time until such extension is completed.

11. (1) An application for a license for crushing cane shall be submitted to the Provincial Government in form 3 Licences for crushing cane Appendix III through the Sugar Commissioner.

(2) A licence granted under section 10 of the Act shall be in form 6, appendix III and the licensee shall be bound by the conditions specified in the said form.*

(3) The quantity of cane to be crushed in a factory in a particular crushing season and crushing capacity of that factory for the purposes of conditions (3) and (4) of the license shall be determined by the Provincial Government in Consultation with the Sugar Commission after taking into consideration—

- (a) the total quantity of cane crushed in the factory worked during the five crushing seasons ending 1939-40,
- (b) the number of hours that the factory worked during those seasons,
- (c) any extension of the plant of the factory after 1939-40, and
- (d) the position of sugar stocks.

(4) An application for the renewal of a license shall be made no less than 13 months before the commencement of the period for which the license is desired. Such application shall be made in form No. 3, Appendix III, to the Sugar Commissioner etc. etc.

*One of the conditions is membership of the India Sugar Syndicate Ltd throughout the period of his license.

12. (1) The occupier of a factory shall submit to the Cane Commissioner on or before 30th August, each year in form 8, Appendix III an estimate of the quantity of cane which will be required by the factory during the crushing season following the ensuing crushing season.

(2) The Cane Commissioner shall, publish the same with such modifications as may be necessary within a month of the receipt of the estimate in the United Provinces Gazette and in the office of the Collector of the district in which the factory is situated.

(3) The Provincial Government may on its motion or on an application for revision filed within a month of the publication of the estimate revise it.

13. (1) In declaring reserved area under section 15(1) of the Act, the Cane Commissioner may take into consideration (a) the distance of the factory from the area proposed to be reserved, (b) facilities for transport to the factory from the area proposed to be reserved, (c) whether the area has previously supplied cane to the said factory, (d) previously existing zoning arrangements among the factories, and (e) the quantity of cane to be crushed in a factory as determined under sub-rule (3) of rule 11.

(2) An order of the Cane Commissioner declaring any area to be reserved for any particular factory or altering the boundaries of an area already reserved or cancelling any previous order declaring an area to be reserved shall be communicated to the Occupier of the factory concerned and shall be published at the office of the Collector of the district in which the area is situated and at the gate of the factory.

(3) An appeal against any order of the Cane Commissioner under section 15(1) of the Act may be made to the Provincial Government within the month of the publication of such order at the office of the Collector.

14. (1) When an area has been reserved, the Cane Commissioner may cause a survey of the sugarcane in it to be made in form 9, Appendix III and may deliver it to the Manager or Occupier of the factory concerned.

(2) The cost of the survey may be assessed at one rupee for every 25 acres of sugarcane surveyed and shall be payable within a month of the delivery of the form referred to in sub-rule (1).

15. (1) The occupier or Manager of a factory may estimate or **Purchase of cane** cause to be estimated by September 30th the quantity **growing in a reserved area** of sugarcane with each grower enrolled in the Growers' Register and shall submit the estimates to the Collector. The Collector may, after such enquiries as he considers necessary, modify the estimates and cause them to be published in such manner as he may direct. In framing these estimates, sugarcane grown on more than one-third of the area of land suitable for sugarcane cultivation in the holding of each grower may be excluded.

(2) By the 15th of September each year, a cane-grower, and by 31st of October each year a cane growers' co-operative society in a reserved area may offer in form 10, Appendix III, to supply during the ensuing crushing season to the occupier or manager of the factory for which the area has been reserved cane not exceeding the quantity estimated in accordance with sub-rule (1) :

Provided that the cane-commissioner may, on consideration of the cane grower's holdings of the members of a cane grower's co-operative society, and the quantity of cane to be crushed by the factory fix the quantity of cane which may be offered under sub-section 18 of the Act.

(3) The occupier or manager of the factory for which the area is reserved shall enter into an agreement with the cane grower or the cane growers' Co-operative Society as the case may be, in form 15 and 12 respectively or in any other form approved by the Cane Commissioner within a month of the offer mentioned in sub-rule (2).

(4) The manager or occupier of the factory shall spread the purchases made in the reserved area in an equitable manner and shall in the case of cane growers of the several areas make purchases of cane only after issuing requisition slips.

In order to comply with this rule the manager or occupier shall cause identification cards to be distributed to all cane growers of the reserved area and shall maintain a record of the same. He will also keep a record of the requisition slips issued and distributed to the growers and returned by them.

(5) Cane grown in a reserved area shall not except with the permission of the Cane Commissioner be purchased by any person without the previous issue at convenient centres in the reserved area,

of requisition slips, and identification cards to the growers by the occupier or manager of the factory for which the area is reserved.

(6) Requisition slips and identification cards to members of a cane growers' Co-operative Society shall not be issued except by such Society.¹

(7) In case of a dispute whether a particular system adopted for the purchase of cane grown in the reserved area is equitable or not, the dispute may be referred to the Cane Commissioner whose decision shall be final.

16. (1) An order of the Cane Commissioner declaring an area to be assigned for a factory or prescribing the quantities of cane to be purchased by its occupier in an assigned area, or modifying or cancelling any such previous orders shall be communicated to the occupier of the factory and shall be published at the office of the Collector of the district in which the area is situated and at such centres in the assigned area as the Collector or the Cane Commissioner may direct.

(2) An appeal against an order of the Cane Commissioner under section 19(1) or (2) of the Act may be made to the Provincial Government within one month of the publication of such order at the office of the Collector.

(3) The occupier of a factory for which an area has been assigned shall under section 19(3) of the Act by the 1st November, 1938 for the crushing season 1938-39 and by the 15th October each year for any subsequent crushing season enter into agreements in form 15, Appendix III or form 12, Appendix III or form 13, Appendix III as the case may be, with cane growers, cane growers' Co-operative Societies or purchasing agents for the purchase in the assigned area of such quantity of cane as may be fixed by the Cane Commissioner.

(4) If such an agreement is entered into with a purchasing agent, the latter shall under section 19(4) of the Act enter into similar agreements in form 14, Appendix III with cane growers or cane growers' Co-operative Societies in the assigned area in respect of all the cane which he has undertaken to supply to the occupier of the factory.

(5) Purchases of cane from growers in the assigned area shall be spread in an equitable manner and shall be made only after the

issue of requisition slips. The purchaser shall cause identification cards to be distributed to the cane growers of the assigned area who have entered into the agreement referred to in sub-rules 15(3) and (4) and he will also keep a record of the requisition slips issued and distributed to them and returned by them.

(6) In case of dispute whether a particular system of purchase adopted by the occupier or manager of a factory or his employee or the purchasing agents in the assigned area is equitable or not, the dispute may be referred to the Cane Commissioner whose decision shall be final.

18. (1) An occupier or a manager or a purchasing agent or any person employed by him shall not purchase cane Minimum prices for a factory or pay for it at a price below the minimum price fixed under these rules in accordance with section 21 of the Act.

(2) The minimum price payable for cane shall be fixed per standard maund of 82-2/7 lbs. avoirdupois.

19. (1) All transactions in connection with the purchase and supply of cane shall be made according to the maund Weighments of 82-2/7 lbs. avoirdupois and it shall not be lawful to use any other weight in relation to any such transaction.

(2) No cane shall be purchased without actual weighment.

(3) All weighments of cane shall be made by the maund of 82-2/7 lbs. avoirdupois and multiples thereof.

(4) The net weight of cane shall be correctly recorded to the nearest eighth of a maund.

(5) The occupier or manager of a factory or a purchasing agent shall permit a representative of a cane growers' Co-operative Society or any other person duly authorised by the Cane Commissioner for the purpose to watch or check weighments and to examine the purchase in which weights are recorded.

Note—The person so authorised by the Cane Commissioner shall ordinarily be of the qualifications and status not lower than those of a Naib Tahsildar.

(6) No scales or weights shall be used, kept or possessed for the weighment of cane by, or on behalf of, an occupier or manager or a purchasing agent—

- (i) which are incorrect, provided that a weighbridge shall not be deemed to be incorrect which weighs correct to within two per cent. of the correct weight of the consignment actually being weighed, and cannot be adjusted more accurately, or
- (ii) the scale arms of which are not clearly marked on both sides wherever possible and are either not accessible to the vendors of cane and their authorised agents or not legible to persons standing near the carts which are being weighed, or
- (iii) which have been disapproved by an Inspector: provided that the Inspector shall not disapprove any scales or weights which comply with the rules unless if after due warning a weighbridge is not adjusted and is persistently found to be incorrect.

(7) All weights used, kept or possessed for the purchase of cane shall be made of iron, brass or other suitable metal and be clearly stamped or marked to indicate the denomination.

(8) That part of the mechanism of a weighbridge by which its adjustment is controlled shall, wherever possible, be kept suitably scaled or locked.

(9) All scales and weights used, kept or possessed for the purchase of cane shall be open to inspection, examination and test by an Inspector at all times without notice and shall be made available for such inspection, examination and test when required by the Inspector. To facilitate such inspection, standard weights of ten maunds in the aggregate shall be kept by the occupier or manager or the purchasing agent concerned as the case may be at every purchasing centre where there is a weighbridge, for testing the same.

(10) An occupier or manager or purchasing agent shall cause all weighbridges or scales used, kept or possessed by him for the purchase of cane to be tested at least twice a week and maintain a record of such tests which shall on demand be shown to the Inspector.

(11) At every purchasing centre adequate facilities for weighment, to the satisfaction of the Cane Commissioner, shall be provided

by the occupier or manager to avoid congestion and undue delay in the weighment of cane, and carts shall not be kept waiting unduly for weighment.

Explanation.—A cart shall not be deemed to have been kept waiting unduly if the supplier of cane, having received instruction in writing to deliver cane on a certain day, ignores those instructions or where the practice of issuing written instructions is in force, brings cane without receiving such instructions.

(12) An occupier or manager shall—

- (i) provide metalled approaches to and exits from all weighbridges at the factory premises to such distance as may be in each case reasonable and feasible, up to a distance of one furlong, when required to do so by the Cane Commissioner,
- (ii) keep the same in a proper state of repair,
- (iii) provide reasonable space for parking of carts waiting their turn for approach to the weighbridges, and
- (iv) provide sheds and cattle troughs at the factory gates to the satisfaction of the Cane Commissioner.

(13) Weighments of the cane for a factory shall not be made more than half an hour after sunset, unless lighting arrangements approved by the Inspector as sufficient for the easy reading of the scale arms by both the purchaser and the vendor or his authorised agent are made and maintained.

(14) No deduction shall be made from the weight of cane on the ground that the cane is improperly stripped or on any other ground whatever, provided that where cane is brought bound in bundles and weighed in bundles a deduction not exceeding 1 seer for every 4 maunds of cane may be made on account of the weight of the binding material.

20. (1) The occupier or manager of a factory shall provide adequate facilities to the satisfaction of the Collector for payment of the price of cane.

(2) The occupier or manager or purchasing agent shall make all payments for cane at the purchasing centre within 24 hours of demand.

Provided that in the case of purchases made at such purchasing centres (other than the factory premises) as may be approved by the Collector of the district in which the purchasing centre is situated, payments shall be made within seven days of demand.

Provided further that when a purchasing centre is closed, all payments must be made at the centre within a week of the closing of the centre and if any growers do not appear to receive payment within this period, payments to them should thereafter be made at the factory gate within 24 hours of demand.

(3) Payments shall be made on the basis of the recorded weight of the cane at the purchasing centre.

(4) Payments for cane purchased for a factory shall not be made to a representative of the grower (or to a representative of the person representing himself to be such grower) unless he is duly authorised by him in writing to receive such payment.

Provided that no person who has purchased the cane from the grower or who is employed by an occupier or manager or a purchasing agent and no person who has lent money to the grower and no agent of such person shall take such payment.

(5) An occupier or manager and purchasing agent shall be liable for all payments due for cane supplied to him or on his behalf. If a purchasing agent fails to make payments for cane purchased by him for a factory, the occupier of such factory shall be responsible for making such payments.

Provided that notice or complaint of non-payment is given or made in writing to the occupier or manager of the factory concerned within six months of the date on which the purchasing centre at which the cane was supplied is closed

(6) Except as provided in sub-rules (7), (8), (9) and (10) no deduction shall be made by way of fine or otherwise from the price of the cane purchased which would reduce such price to a figure below that calculated at the prescribed minimum rate:

Recoveries of the dues of a cane growers co-operative society may be made by deduction from the price payable for cane.

(7) If an occupier or manager provides his own means of transport (including a tramway) a deduction for the cost of such transport may be made at a rate not exceeding one pie per mile per maund, subject to a maximum of one anna per maund, from the price of cane purchased at a purchasing centre.*

Provided that the Collector of the district in which the purchasing centre is situated approves of the proposed means of transport and declares the purchasing centre to be one to which this proviso applies and such purchasing centre must be situated at a distance of—

- (a) not less than 5 miles from the factory, in case transport by rail by direct route is not possible,
- (b) more than 5 miles from the nearest railway station, in case through transport by road is not possible and the cane has to be transported partly by road and partly by rail, or
- (c) more than 5 miles from the nearest railway station and more than 10 miles from the factory, in case through transport by road as well as transport partly by rail by direct route and partly by road is possible.

Note.—The supplier of cane shall have the option of delivering the cane using his own means of transport and in such case he shall be entitled to receive payment of the full price payable, without deduction.

(8) Such deduction as the Provincial Government may be notification direct may be made from the price of cane purchased at a purchasing centre situated in any tract declared by the Provincial Government as a tract—

- (i) in which cane is definitely below the average of standard cane for the area on account of natural causes *e.g.*, serious water-logging, intensive insect attack, disease or severe frost, or
- (ii) in which a specified inferior variety of cane is ordinarily or preponderatingly grown, or

*Such a provision is not found in the Bihar Sugar Factories Control Rules.

- (iii) in which owing to inaccessibility, or other special causes, the circumstances are such that a deduction from the minimum price would be in the interest of the growers.

(9) The Provincial Government, if satisfied that in any local area a substantial quantity of cane will remain standing and unsold on the 1st May and is not likely to be purchased at the prescribed minimum price, may by notification in the Gazette direct that in such area such deduction as may be specified in the notification may be made from the price of the cane purchased after that date.

Communiqués of U. P. & Bihar Governments, 1940*

10th April, 1940

*Dated 10th April, 1940, 21st June, 1940, 3rd August, 1940,
21st August, 1940, 19th October, 1940, 19th December, 1940,
and 21st December, 1940.*

The following joint *communiqué* was issued by the Governments of the United Provinces and Bihar on April 10, 1940:—

Special Reductions in Cane Prices.

"A special meeting of the Indian Sugar Syndicate was held at Lucknow on the 2nd April 1940 to consider the situation arising out of the large accumulation of stocks of sugar for which they had paid high prices of cane, the possibility of a large carry-over if the factories in the United Provinces and Bihar continued to crush the cane that was still available, and difficulty of further finance which was being acutely felt by the members who had a large part of their capital locked up in the sugar which they had not been able to sell. The Syndicate in that meeting decided to close down the mills with effect from the 10th of April unless cane prices were reduced to 0-5-9 per maund.

According to the Syndicate their alternative suggestion was solely intended to help the growers out of their difficulties as the factories had no intention of making any profit out of the sugar produced after this date. Selling at a higher price they would undertake to distribute the additional profit calculated according to the sliding scale to the growers. The Syndicate also offered to make available 200,000 tons of sugar at Rs. 5/- per maund from Bombay for purposes of export. This was put forward on the ground that through the transaction would involve heavy losses to the sugar manufacturers it would ease the situation by taking off the surplus sugar from the Indian market and thereby improve the prospects of the next crushing season 1940-41. The Syndicate also decided to sell direct appropriate quantities of sugar at reduced rates at suitable centres to keep out Java sugar in the interest of the Indian Sugar Industry.

It may be useful to recount in brief the circumstances that have led to the present impasse. At the beginning of the season in November it was estimated by the factories that there would be a substantial shortage in the supply of cane owing to the serious damage to crops in certain parts. The output was thus expected to be below the requirements of the country and with rising commodity prices as a result of the War the season opened with a feeling of over optimism. The Syndicate fixed and maintained a high basic price; the manufacturers were out to make as much sugar as possible with the hope of realising better prices later on, while the majority of the growers, encouraged by the expected shortage of

*For various statements issued by Pandit Jawaharlal Nehru, (in July 1940), and Dr. Rajendra Prasad for solving the crisis facing the industry, and particularly the question of utilising the cane-crop, *Vide* monthly issues of "Indian Sugar" from July, 1940, to February 1941.

cane and high prices, did not take the precaution of entering into bonds with the factories. Sugar prices rose as the season advanced and cane prices had to follow suit in the sliding scale. The higher cane price attracted larger supplies of cane, and cane, which would have ordinarily been made into *gur*, was also diverted to the factories.

By the end of February the stocks had risen to a high level and Government warned the Syndicate of the serious position created by their having fixed a high basic price out of parity with the actual market quotations. The inevitable result followed. The ever increasing output of sugar further weakened the market, but the sugar manufactured in the United Provinces and Bihar did not move freely while sugar produced outside these Provinces reaped the benefit. The last warning was conveyed by the Government representative at the Syndicate meeting held on the 2nd of March at Calcutta in a written statement and as a result of it the basic prices of sugar were in effect reduced, through with some reluctance by 0-12-0 per maund as the sugar excise had been increased by that amount. But this was now insufficient. The stocks at the end of March were $1\frac{1}{2}$ crore maunds and there was a certainty of over-production and a possibility of a large carry-over for the next season. In other words, the situation that was now facing the industry was that more than three-fourths of the total output of sugar had already been manufactured on the basis of an exceptionally high price of cane, that it was unlikely that all the accumulated stocks would be marketed except at a loss and that any further production except at a considerably reduced price of cane was bound to aggravate the position still further.

The above position was undoubtedly serious both from the point of view of the mills as well as the grower. The Governments of the United Provinces and Bihar have consulted some of the representatives of the cane-growers' co-operative societies and also the Sugar Control Board at an emergent meeting held on the 8th of April. They have carefully considered the situation in all its bearings. They have no doubt that but for the Syndicate's unduly optimistic reading of the situation the position which has now arisen would not have been possible. Had the basic sugar prices been kept at a reasonable level and sufficient quotas released from time to time, prices would have been more in accordance with market requirements and cane prices would have been ruling throughout the season at an appreciably lower level than has been the case, with the result that the growers would have got considerably less for the cane. Factories are within their right to begin and close their crushing operations when they choose and most of them have already crushed the minimum amount of cane prescribed in their licences under the Sugar Factories Control Act. Government cannot, however, ignore the fact that the factories are under a moral obligation to take as much cane as possible which has been left standing as a result of their own exhortations and guarantees explicit or implicit that cane in reserved areas will be crushed.

There are at least 250 lakhs maunds of cane available in the United Provinces, and 155 lakhs maunds in Bihar for crushing in the factories. This cane cannot now be converted into *gur*, and if the factories close down the growers stand to lose the entire value of the cane now on their land. If, on the other hand, the factories take the quantities of cane still available at the prices fixed by the two Governments, the growers will receive about a crore of rupees in the United Provinces and about half a crore of rupees in Bihar. These Governments charge at present

a cess of 6 pies per maund of cane crushed in vacuum pan factories. On the basis of the cane which still remains to be crushed, the Governments of the United Provinces and Bihar would get about Rs. 8 lakhs and Rs. 4 lakhs respectively from the cess. These amounts they have decided to forego in the interest of the growers.

After careful consideration of the entire problem the Governments of the United Provinces and Bihar have decided as follows:—

- (1) That the price of cane will remain unaltered till the 10th of April.
- (2) That a special reduction will be made in the price of cane from the 11th of April and that the minimum price of cane will be 0-6-3 up to the 30th of April and thereafter 0-5-6 per maund.
- (3) That separate account will be maintained and separate receipts granted of cane delivered to and taken by the factories in respect of all cane supplied on and after the 11th of April.

The Syndicate have given an undertaking that in case they are able to market the sugar manufactured after the 11th of April at rates higher than those corresponding to the above cane prices in the sliding scale, the mills will pass on that extra profit calculated according to the sliding scale to the growers, that the factories will take as much cane as possible from the reserved areas as well as the areas from which they have hitherto been drawing cane, whether such cane is bonded or otherwise, and they will continue crushing till such times as the available and effective supplies of cane are exhausted and that factories will not close down prior to consultation and approval of the Cane Commissioner.

The Governments of the United Provinces and Bihar have decided on the measures, described above, primarily with a view to meeting the special case of surplus cane supplies, which could not be converted into *gur* or otherwise profitably be disposed of. The scheme of payment for cane which is being adopted for the next few weeks is in accordance with the deferred payment scheme which is well-known in certain parts of India and does not involve a departure from the sliding scale.

21st June, 1940

U. P. and Bihar Government Withdraw Recognition of the Syndicate.

The following is the full text of the Bihar Government's* Press Note, issued on 21 June, 1940.

"At the time when the Indian Sugar Syndicate was recognised by the Governments of these provinces in 1937, it was hoped that the Syndicate in regulating the price of sugar would look to the interest of manufacturers, growers and consumers alike and also help to stabilize the price of sugar at as low a level as possible in the ultimate interests of the industry in India as also in Bihar and the United Provinces.

*The press note of the U. P. Government was less comprehensive. Vide "Indian Sugar," July, 1940, p.37.

"The experience of the last two years has, however, been otherwise. The Syndicate as a monopolistic organization has looked to the immediate interest of the manufacturers only and tried to maintain as high a price of sugar as possible. It is only the competition from other provinces and from Java, apart from the position of supply and demand of sugar in the market, that has prevented the prices from rising higher.

"While the price of sugar has been allowed to go up as high as the market could allow, the Syndicate has placed an artificial check on the fall in prices by fixing a high basic price without taking due regard of market conditions. The result of this interference with the economic principles of demand and supply has brought about serious complications in the industry. There is at present a large accumulation of stocks in the factories in these provinces which they cannot expect to sell at the present prices.

"The Syndicate was proposing to meet this situation by curtailing production during the next crushing season and for this purpose had actually advised factories not to submit their estimates of cane requirements to the Cane Commissioner unless the Governments of Bihar and the United Provinces declared in advance a very low price for cane.

"Recently the Syndicate held out a threat to the two Governments that unless the price of cane was drastically reduced it would advise factories not to take out crushing licences for the next season.

"Such a course would be highly detrimental to the interest of growers and could not be tolerated by any Government. Some of the individual groups of factories, it is obvious, are not in favour of such a suicidal policy and are anxious to break away from the Syndicate and to sell sugar at lower prices to clear their stock before the next season.

"The All-India Sugar Conference held recently at Simla was strongly of the opinion that a combination of manufacturers which acted against the interests of the consumer in a protected industry should be discouraged. At the same conference the representatives of the Syndicate expressed the view that a Syndicate which did not include all the factories in India was not able to act in the best interests of the industry, and requested the Governments of Bihar and the United Provinces to withdraw the statutory recognition so that it might act as a voluntary organization.

"Under the circumstances, the Governments of Bihar and the United Provinces have decided, in consultation with the Sugar Control Board, to cancel the rule so that it may be open to factories to withdraw from the membership of the Indian Sugar Syndicate for which they have to give three month's notice before September, 30.

"At the same time these Governments are considering the question whether any other marketing organisation is necessary to stabilize the sugar market in the interests of the industry and the grower. With a view to safeguarding the interests of the grower and the less efficient factories, they are also considering the question of fixing a minimum price of sugar under the Sugar Factories Control Act so as to ensure a fair return to the grower and the manufacturer."

3rd August, 1940

Recognition Restored to Syndicate.*U. P. and Bihar Joint Communique: New Scheme of Control*

The following is the full text of the *communique*:—

"In the month of June last, the Governments of Bihar and the United Provinces had withdrawn the rule under which it was obligatory for a sugar factory to be a member of the Indian Sugar Syndicate Limited. This was because the Syndicate was following a policy of maintaining a very high price of sugar, which was against the express purpose for which the Syndicate was originally recognised by the two Governments, namely, to regulate the price of sugar with due regard to the interests of manufacturers, growers and consumers alike and also to stabilise the price of sugar at as low a level as possible in the ultimate interest of the industry in India in general and in Bihar and the United Provinces in particular. The high price of sugar during the last crushing season brought in its train the high price of cane by the operation of the sliding scale, with the result that the factories were stocked with a large quantity of high priced sugar which the market could not take. With this inflated price the sugar would not move, but the Syndicate showed no inclination to bring down the price by cutting the profits. The large carry-over and the consequent crippling of the finances of the factories, who had taken large advances from the banks against their stocks, meant considerable curtailment of the next crushing season with its serious consequences on the cane-growers. The Governments of Bihar and the United Provinces had, therefore, no other alternative but to withdraw the recognition of the Syndicate, so that it might be open to the factories to withdraw from its membership for which they had to give three months notice before September 30, 1940. The Governments were in the meantime considering the question whether, failing to reorganize the Syndicate on the lines contemplated in section 11 (a) of the Sugar Factories Control Act, it would not be necessary to set up another marketing organisation which would help to stabilise the sugar market and generally to rationalise the industry.

"While the withdrawal has brought down the prices to a certain extent, it has set loose the forces of disorder, and speculation and malpractices are rampant in the sugar market. Some of the factories have cut down prices below the economic level to clear their stocks while others are threatened with foreclosure by banks. The dealers are afraid of buying through fear of a further fall in prices with the result that sugar is not moving in spite of the large accumulation of stocks. As a result of this confusion, a large number of factories in Bihar and the United Provinces are in danger of complete breakdown, bringing out the urgency of stricter Government control in the interests of the industry and the cane-grower. The Board of Directors of the Indian Sugar Syndicate in their last meeting held on July 26, 1940, realised their helplessness and the mistake of their past policy, and decided to approach the Governments of Bihar and the United Provinces to come to their rescue and, for this purpose, to restore the recognition of the syndicate and to take over such control of the production and price of sugar as they may consider necessary. A deputation of the Indian Sugar Syndicate accordingly waited on Their Excellencies the Governors of the United Provinces and Bihar. The deputation urged the two Governments

to restore the statutory recognition of the Syndicate which has been withdrawn, and thereby strengthen its hands and restore confidence, to stop all forward sales, to set up an emergent board of control to regulate the production and sale of sugar—both as regards quantity and prices, and to take such other measures as may be necessary to save the industry.

"The Governments of Bihar and the United Provinces have given their most anxious and careful consideration to the very serious situation that has developed in the Sugar Industry, and after discussion with the representatives of the Syndicate at which the representatives of the Government of India and the Imperial Bank were also present, have come to the following conclusions:—

"In order that the market may be stabilised and sugar may move freely, it is necessary that the present prices must be brought down and correlated with the probable prices of the next crushing season. It is by this means that the factories may be relieved of their stocks as much as possible so that they may be able to crush cane during the next crushing season up to their full crushing capacity and thereby give the maximum relief to the cane-growers who have already planted their cane. "If the present cut-throat competition and speculation be allowed to continue, some of the weaker factories will completely break down while the others may find it difficult to continue crushing during the next season after paying an economic price for cane. These contingencies must, therefore, be avoided in the interest of the cane-grower.

"Any surplus stock which cannot be sold during 1940-41 at the minimum economic price may be carried over to 1941-42 and the production of that year may be regulated according to demand by regulating the cultivation in time.

"In order that the above measures may be given effect to, it is necessary that a marketing organization should be set up under the full control of Government in respect of its policy regarding price, quota and production, so that it may not lapse into a monopolistic organisation. As the Syndicate is now willing to work in accordance with the above scheme, the Governments of Bihar and the United Provinces have decided to restore the statutory recognition of the Syndicate, subject to the condition that it will forthwith amend its Articles of Association on the following lines:—

- (1) The Syndicate, which will have its headquarters at Cawnpore, would be a selling organisation only for the purpose of regulating sales within the limits of prices and quotas fixed by Government and will confine its activities exclusively to the marketing of sugar.
- (2) The Chairman of the Syndicate will be elected by its Board of Directors, but his election will be subject to Government approval. The Executive Officer of the Syndicate will be nominated by the Governments of the United Provinces and Bihar.
- (3) A Sugar Commission would be set up by the two Governments which would be the final authority, subject to Government control, on all matters connected with the production and sale of sugar, as well as other matters regarding cane prices etc.,

which are referred to it by these Governments, provided that the Syndicate will have the right at all times to approach the Governments direct. The chairman and members of the Commission will be officials appointed by the two Governments, and they will be *ex-officio* members of the Board of Directors of the Syndicate.

- (4) The basic prices and quotas for individual mills are to be fixed by the Syndicate but will be subject to the approval of the Commission.
- (5) All information relating to prices, quotas, etc., will be confidential till it is released for publication by the Commission.
- (6) The Syndicate will furnish all the necessary information to the Commission.

"It is hoped that with the restoration of the recognition of the Syndicate and its re-organisation on the above lines, the sugar market will speedily return to its normal working conditions."

21st August, 1940

U. P. and Bihar Governments to Lend Financial help to Industry.

Cane Price for Next Season to be -1/2: Cane Areas to be Restricted

"The Governments of Bihar and the United Provinces have heard with pleasure of the acceptance by the Sugar Syndicate at its meeting held at Cawnpore on 15th August of the proposals made by the two Governments in their *communique* of 3rd August for re-organisation of the Syndicate as a condition of re-recognition," states a Press *communique* issued on August 21.

The *communique* continues that in furtherance of those proposals the two Governments have decided to appoint a Sugar Commission at once which will consist of Mr. J. E. Pedley, C.I.E., M.C., I.C.S., as Chairman, and the Cane Commissioners of the two provinces as members. The Commission, as already announced, will be the final authority, subject to Government control, on all matters connected with the production and sale of sugar as well as other matters regarding cane prices etc., which are referred to it by the Governments of Bihar and the United Provinces. The selection of an Executive Officer for the Syndicate, in accordance with the proposals contained in the *communique*, is under consideration.

"In view of the heavy carry-over of unsold stocks, it is imperative that a large proportion of these stocks should be cleared before the commencement of the next crushing season.

"Owing to the high cost at which these stocks were produced, an adequate clearance is not possible without financial assistance to the industry to bring down the selling price to a price which can be related to the probable selling price of next season's production.

"The Governments of Bihar and the United Provinces have accordingly decided with the consent and help of the Government of India to assist the industry by assuming immediate responsibility for payment to the Government of India of Re. 1/- of the excise duty payable on each maund of sugar manufactured during the last season and at present unsold. This will take effect from August 25, 1940.

"The method by which the Governments concerned will recover this subsidy from the industry in future has already been discussed with representatives of the Syndicate and is being considered by the Local Governments concerned. The final decision will be announced as soon as practicable.

"Future prices of sugar will be fixed in accordance with the decision of the Commission and after consultation with the Sugar Control Board, but it is expected that the prices of cane for the next crushing season will be in the neighbourhood of -4/9 a maund.

"As has been made clear from time to time, however, in view of the unusually heavy stocks, the quantity of cane, likely to be crushed in the season 1940-41, will be substantially less than in the season 1939-40. Taking all relevant factors into consideration, including the fact of a shorter crushing season next year, it appears probable that next season's sugar price will be in the region of Rs. 9/- per maund.

"The difficulties of the industry caused by the existence of unusually heavy stocks, are not likely to be solved until the end of the crushing season 1941-42. In consequence, arrangements must be made for 1940-41 for converting into *gur*, *rab*, or *khandsari* sugar a considerably greater proportion of the cane crop than was so converted in previous seasons.

"Further, a scheme for restricting areas under cane in the neighbourhood of sugar factories will have to be formulated for the 1941 sowing season."

19th October, 1940.

Official Communique on Extent of Production of Sugar in U. P. and Bihar

The joint "communique" announcing the decision of the U. P. and Bihar Governments in regard to production quota, cane prices, cess, co-operative societies commission, etc., for the ensuing season was issued on October 19, 1940.

The salient points in the "communique" are:—

- (a) *Production quota fixed at 7.2 lakh tons;*
- (b) *Manufacturers' profits are to be cut down to the minimum;—*
- (c) *Cane prices to be fixed at 0-4-6 per maund;*
- (d) *Ordinary cane cess to be reduced from 6 pies to 3 pies;*
- (e) *Excise realisation cess to be fixed at 6 pies per maund;*

- (f) *Co-operative societies' commission to be reduced as far as possible; and*
- (g) *Sugar prices not to be less than Rs. 9-2 per maund.*

The following is the full text of the *communique*:—

"In their *communique* of August 21, 1940, the Governments of the United Provinces and Bihar announced that future prices of sugar would be fixed in consultation with the Sugar Commission, and that in view of the unusually heavy stocks of sugar, the quantity of cane likely to be crushed in 1940-41 would be substantially less than in 1939-40. Since then, mainly by reasons of the reduction and stabilisation, the price of sugar has been satisfactory. But it is estimated by the Sugar Commission that closing stocks on November 1, 1940, will be abnormally high—probably about 4 lakh tons.

Production to be Restricted.

"It is inevitable, therefore, that if closing stocks on November 1, 1941, are not to be increased, production during the coming season will have to be restricted and the two Governments on the recommendation of the Commission are accordingly taking steps to that effect. The production of sugar for the two provinces is not likely to exceed 7.2 lakh tons, which will provide for each factory a quota giving a crushing season of approximately 97 days. This will naturally increase the manufacturing costs. Moreover, it will be necessary to levy a special cess of six pies per maund of cane in order to repay the loan, advanced to the two provincial Governments by the Government of India. For these reasons and because it is desirable to keep the price of sugar in the region of Rs. 9 per maund, the two Governments have decided to cut down the manufacturers' profit to the minimum, to fix price of cane at four annas and six pies per maund, to reduce the ordinary cane cess from 6 pies to 3 pies per maund, and to reduce as far as possible the rate of co-operative societies' commission.

"The selling price of standard sugar in the U. P. and Bihar during the coming season shall not, except in the Port markets, be less than Rs. 9-2-0 per maund ex-factory. If it should be found necessary to permit the selling price of standard sugar to exceed Rs. 9-6-0 per maund and the average selling price for the year November 1, 1940 to October 31, 1941, should exceed Rs. 9-8-0 per maund, deferred payment to the suppliers of cane will be enforced according to the amended rules.

Closing Stocks to be Reduced.

"It is evident that in the interests of the industry as a whole, the earliest opportunity must be taken to reduce closing stocks. Owing to the very extensive area now planted with cane, it is impossible without inflicting undue hardship on the cane-growers to effect any reduction during the season 1940-41. It is, however, the intention of the two Governments so to restrict the planting of cane to be crushed in the season 1941-42 as well as the sugar to be produced during that season that the closing stocks on November 1, 1942, may not exceed 2 lakh tons, and with this object in view they now announce that the total production in the two provinces for the season 1941-42 shall be substantially less than the quota announced for the season 1940-41, namely, about 7.2 lakh tons of sugar."

19th December 1940.

Restriction on Sugar Production in 1940-41 and fixation of price of sugar.

Press communique issued by the Governments of the U. P. & Bihar, on 19th December, 1940.

Since the Governments of the United Provinces and Bihar issued their joint communique on October 19, 1940, various over-production of sugar and cane. These proposals have received the careful consideration of the Governments and they have come to the conclusion that in the interest of the industry including the cane growers it is essential that the production of the sugar in the current season should be restricted. They are accordingly allotting quotas of cane to the factories in the two provinces estimated to produce 7,20,000 tons of sugar.

Consideration and discussion of these proposals have inevitably seriously affected the sugar markets and it is essential that confidence should as far as possible be restored. The Governments have therefore fixed the basic price of new sugar as announced in their communique of October 19, 1940, at Rs. 9½/- per maund except in port markets.

The Governments realise and deeply regret that some hardship and loss will be suffered by cane growers in certain reserved and assigned areas in the provinces where gur is generally not manufactured. They are, therefore, considering ways and means of providing some compensation to the growers in these areas where cane will be left uncrushed and cannot otherwise be utilised.

21st December, 1940.

U. P. and Bihar Government reiterate their decision for restricting production to 7.20 lakhs tons in 1940-41.

Press-Note issued by the Governments of U. P. and Bihar.

The Governments of the United Provinces and Bihar have in their joint Communique of December 19, 1940, referred to various proposals* that have been made to meet the difficult situation created by the over production of sugar and of sugar cane. There are over 300,000 tons of white sugar at present in the godowns of the factories in these Provinces and the area under cane is far in excess of the needs of the Industry. The Government consider it necessary to explain the reasons for their rejection of these proposals and of their adherence to their previous decision to restrict the production of sugar during the current season to 7,20,000 tons and to fix the price of new sugar at Rs. 9½/- per maund. This decision, as will be remembered, was taken upon the urgent representation of the Indian Sugar Syndicate and of the Industry itself that if crisis was to be averted crushing should be so restricted as to ensure that the

*Reference is to various schemes and proposals put forward by Dr. Rajendra Prasad for crushing more cane.

carry-over of sugar stocks should not exceed 400,000 tons at the beginning of the 1941-42 season and 200,000 tons at the beginning of the 1942-43 season.

The proposals made are three, the production of sugar for export, the production of a cheap form of brown sugar or "factory Gur" and the production of as much white sugar as is possible at the lowest possible price, the main object of each proposal being to lower the costs of production of new sugar and to crush as much as possible of the bumper crop of cane in the factories.

Export.

Two offers have been received by the Indian Sugar Syndicate from the United Kingdom in the past six months on each occasion for the export of 200,000 tons of sugar. The first was received last July but could not be accepted because sugar of the quality and in the quantity required could not be sold at the price and on the terms fixed. The second offer was made recently but it was stipulated that the amount of sugar required should be available by December 31, 1940. Negotiations were at once opened but had to be closed because it was found that the necessary shipping could not be procured.

It is very unlikely for this and for other reasons that the export of sugar to the United Kingdom will be possible in 1941, but should it be possible the two Governments will give all the assistance they can to ensure that sugar of the quality and in the quantity required and at the price offered may be produced

Brown Sugar or Factory Gur.

The suggestion made was that after or simultaneously with the production of the quota of 7,20,000 tons of white sugar the factories should from the surplus cane produce a cheap brown sugar or factory gur of such a quality that it would not compete in the markets with white sugar but would find a market among consumers of the superior type of gur. The Industry itself expressed its apprehension about this new product. In the first place as the production of the new product was experimental it was not certain that it would find a market and the manufacturers could not undertake to hold large quantities of the product, even if it could at a later date be reprocessed, both on account of the difficulties and the cost of storage and on account the high cost of the sugar, if it was eventually re-processed. In the second place the Industry feared that if the product was marketable it would by reason of its cheapness seriously prejudice the sale and consumption of white sugar, and in particular the sale of the large stocks of old sugar which remain at present unsold. This was also the view of the Banks. Finally objection was raised on behalf of the makers of gur, a cottage industry product, that the factory-made article would compete with the hand-made commodity and lead to a slump in prices in the gur market.

Maximum Production of White Sugar.

It was proposed by the Industry and by certain persons on behalf of the cane-growers, in particular by Dr. Rajendra Prasad that with the object of lowering the production costs of new sugar and of reducing the large surplus of sugarcane, the price of cane should be reduced to

four annas, all cesses should be withdrawn and the manufacturers should be free to crush as much cane and produce as much sugar as could be produced during the current season. Dr. Rajendra Prasad went so far as to advocate that with the exception of the enforcement of the payment of a minimum price for cane all control of the Industry by the two Governments should be withdrawn. Apart from the effect of this proposal upon Provincial Finances, the first and immediate effect of acceptance of this proposal would inevitably be a heavy fall in the prices of existing stocks of sugar, a considerable portion of which has been and is still being financed by the banks and agents without any margin. On any appreciable fall in the price of existing stocks, which it is to be noted were sold in very large quantities at Rs. 8|10|- during September and October a considerable number of factories would immediately find themselves liable to their Banks and Agents for amounts which they could not meet. Even in cases where such factories could be temporarily accommodated, they could scarcely expect to obtain advances for the production of new sugar except on terms and to a limited extent that would make it difficult, if not impossible, for them to work. It is, therefore, beyond doubt that the immediate effect would be the closure and probable bankruptcy of a number of factories with the result that none of the cane normally supplied to these factories from their reserved areas would be crushed at all. A further question is whether the Banks would be willing after experience of over-production in 1939-40 to finance an even greater excess of production in the current season. In fact it has been made clear to the Governments as was to be expected, that even if any advances, at all, were forthcoming on the proposed excess production, they would inevitably be so restricted as to make it impossible for a number of factories to work for more than a small part of the season. This eventually again would result in large quantities of cane in their reserved areas remaining uncrushed.

The major difficulties have been frankly admitted by the Industry itself in proposals that have been submitted and it has been unable to suggest any methods of overcoming them save either (by implication) that of allowing the weaker members to go into liquidation with disastrous consequences to their cane-growers or of calling on the Governments for a further subsidy that would amount to many lakhs, possibly to a crore of rupees. Members of the Industry have also admitted the acute difficulty many of them would have to face in the matter of the storage of this extra sugar, while they will still for several months have to hold stocks as well and that to provide the necessary accommodation for the new stocks produced to the extent proposed of between nine and ten lakhs of tons, some of them at any rate would have to obtain financial aid from the Governments for the construction of godowns. Adequate accommodation affording the necessary protection would be extremely costly, even supposing that it could be provided before the break of the monsoon.

The Governments are of opinion that the proposal to withdraw all control except the enforcement of payment of the minimum price for cane is also impracticable. The effect on the Industry as a whole including the cane-growers would be disastrous, while a few factories or a group of factories with the necessary financial backing would rapidly create a monopolistic organization with every opportunity for the exploitation of grower and consumer alike to their own profit. To the other

method suggested by the Industry the Governments must naturally take the same objection as the Banks, namely, their inability to finance an even greater excess of production than that which has created the present situation, with no guarantee that the excess sugar will be sold or the subsidy additional to that of a crore and a half of rupees already given will even be partly recovered.

For these reasons the Governments of the United Provinces and Bihar have decided to abide by their previous decision to restrict the production of sugar to a total of 7.2 lakh tons so as to avoid further deterioration of the stock position and to maintain the price of new sugar at Rs. 9½/- a maund so as to avoid the collapse of weaker factories and a consequent calamity to the cultivator. They are satisfied that taking into account the interests of the Industry, including those of the cultivator, not merely for the current season but for succeeding seasons, the restrictive policy adopted is essential. The Governments are fully conscious that in certain areas, in particular in the trans-Gogra districts of the United Provinces and in Bihar, considerable areas of cane in reserved and assigned areas will remain surplus and cannot be utilised for the purpose of crushing in the mills or for other purposes. They are accordingly considering a scheme to provide some compensation to these growers in these areas who normally supply all their cane to the factories and who this year will not be able to supply all their cane or otherwise utilise it.

All-India Sugar Conference at Simla

14th June, 1940

Speech of the Hon'ble Sir Ramaswami Mudaliar
COMMERCE MEMBER, GOVERNMENT OF INDIA

Opening the Sugar Conference held in Simla 14th June, 1940, the Hon'ble Dewan Bahadur Sir A. Ramaswami Mudaliar, Commerce Member of the Government of India said:

"Gentlemen, I may first convey the thanks of the Government of India to the representatives who have come here from long distances at much personal inconvenience. The object of this Conference has been already broadcast and perhaps it is known to many of you. There were suggestions by the members of the Central Legislature and these suggestions were backed up later both by the industrialist and by Provincial Governments, that in view of the conditions which the industry faces today, it would be advisable for the Central Government to get together all the interests and find out what the difficulties of the industry are and how they can be got over.

"I undertook on behalf of the Government of India and responded to a suggestion from the un-official members in the Council of State that the Commerce Department will use its good offices to convene a Conference of this kind if there was an indication that there would be a good response both from the industrialists and from Governments who were chiefly concerned with this industry. It is because we have been able to get that response and support from those who are vitally concerned in this industry that it has been possible for us to convene this Conference.

"I do not wish, at this stage, to go into the details of the difficulties which it has been alleged face the sugar industry today. Most of you who are much more directly concerned will be in a position to state what those conditions and difficulties are. As I visualise the problem, there are two aspects of these difficulties which require our consideration. We have received a number of communications from industrialists and from Governments from which it is clear that these two aspects can be kept apart to a certain extent.

The Immediate Difficulty.

"There is the immediate difficulty which faces the sugar industry consequent on over-production and the high cost at which that production was made. If I may say so, that is a short range problem. The immediate problem is how to dispose of surplus stocks and how to prevent a serious situation arising out of it before the next crop comes in; The industrialist will find himself at a great disadvantage with the surplus stock about him; to take to the same amount of industrial production which he has done in the past in the interest of the sugar-cane grower. I do not under-estimate the difficulty of the position. In fact we have been paying our keen attention to that aspect of the question, but as I said, that is an immediate problem which faces the industrialists in two provinces, United Provinces and Bihar. I do not think from the representations that have reached me that it is a problem which is acute or indeed has been felt at all in the other Provinces.

"We have taken certain steps which in the course of the discussion I may be in a position to state to the Conference, but, as I said that is an immediate problem which is being considered. The larger issue that has to be considered at this Conference remains: is everything right with the sugar industry, if it is not, where are the defects and deficiencies and how can they be corrected. I do not want to anticipate the discussion at this Conference and I certainly am not prepared at this stage to put forward any suggestions regarding what may be done. I said in my opening remarks that the Commerce Department will be prepared to use its good offices in surmounting these difficulties. But it has to be realised that the Commerce Department and the Government of India have great responsibilities towards the industry as a whole from the long range point of view.

Government's Responsibility.

"I have received during the past few months a good deal of literature on the subject. In this the sugar industry has surpassed the textile industry as regards literature and propaganda, but there is a danger that due to numerous reports of Committees and Sub-Committees, the essential aspects relating to the industry may be lost sight of and I would, at this stage, merely try to recall the Conference some essentials which must be borne in mind when we deal with the difficulties of the sugar industry or any problems connected with it. As

a protected industry, the Central Government has a direct responsibility with reference to this industry. It cannot dissociate itself from the reactions that may be taking place, from time to time by the manner in which the industry is conducted either by the proprietors or by any other authorities. Being a protected industry the Government of India has a responsibility not merely to see that the amount of protection is sufficient to enable the industry to keep on its own legs but also to see that the other interests which are connected with it are not unduly prejudiced.

Principles of Protection.

"You may remember that the Indian Fiscal Commission many years ago laid down certain cardinal principles regarding a protected industry, the growth and the development of a protected industry. There have been many criticisms about the principles of the Fiscal Commission laid down for granting protection to industries, but I do not think there has been any criticism as regards those conditions which the Fiscal Commission laid down regarding the duty of the Government to watch the course of protection. The Fiscal Commission laid down that a Tariff Board should watch the working of protection and in its absence the Government of India have taken upon themselves the duty of watching the situation from time to time during the period of protection. That responsibility still lies with the Government of India and it was only the other day that I stated in the Assembly that the Government was watching keenly, from time to time, how a protected industry was being developed. As I said, that is the first fundamental which has to be borne in mind. If that is borne in mind there are certain ancillary facts which naturally will also be borne in mind.

"The Sugar industry is a big industry. In more than one respect, it differs from the Cement industry or the textile industry and from other industries, because the raw material can easily deteriorate if it is kept for a length of time. The Tariff Board which examined the question of protection of sugar took that into consideration when it laid down as a corollary to the protection of the sugar industry that there must be a certain amount of protection to the sugarcane grower. The Government in 1934 passed the Sugarcane Prices Bill and the Legislature fixed a minimum price for the sale of sugarcane and the working of the Act was left to the Local Governments concerned.

* *Farm and the Factory.*

"The Legislature felt that in certain cases without making any general reflection on the industrialists, they might exploit the producer of sugarcane, a commodity which was easily perishable. The Sugarcane Act empowered a Local Government to fix a fair price for the cultivator and the *raison d'être* of the Act was to prevent the exploitation of the agriculturists by the very much more powerful industrialist. I suggest that this is a second fundamental which should be borne in mind.

"I should like to draw your attention to one other fact. I suggested that the sugar industry being a protected industry involves as a necessary consequence the application of certain important principles. The Fiscal Commission remarked, about a protected industry, that a time will come when the burden on the consumer would be relieved by the growth of such internal competition as would necessarily bring down the prices for the manufactured article. The Fiscal Commission laid great emphasis on the fact that while the import duty may be kept at a high standard that would not in itself mean the perpetuation of a heavy burden on the consumer. A stage will be reached when by the development of the industry under the shadow of protection by the increase in production owing to various entrepreneurs coming into the field because of that protection, such internal competition would come into existence that the prices would go down and the consumer will be benefited.

Minimum Price fixed by combines requires justification before Government.

"How far is this principle violated by the organisation of trusts or combines which fix minimum prices for the sale of the commodity and by such combinations prevent under pains and penalties anybody selling below a certain figure. Normally, in the capitalistic system to which we are accustomed it is not a crime if traders come into a combine, but with reference to a protected industry that is not quite so simple and I am not at all sure whether steps should not be taken to prevent it. I do not suggest that in all circumstances, with reference to a protected industry, the fixation of a minimum price by a combine is necessarily wrong, but I do venture to state that such a state of affairs requires to be justified before the Government of India.

"Gentlemen, I do not want to go into any greater detail. You will find that no Agenda has been fixed and it is for members to raise any issue before the meeting relating to the industry." I propose of 1937-38.

to invite a general discussion which will be useful to all of us. These issues may be both on what I have called the immediate problem and on the long range problem, but I would like members to keep the long range policy mainly in view in their discussions.

"After the general discussion, I shall place certain specific issues for more detailed consideration and try to ascertain the general sense of the Conference on such issues."

17th July, 1940

Speech Mr. P. M. Kharegat C.I.E., I.C.S.

VICE-CHAIRMAN, IMPERIAL COUNCIL OF AGRICULTURAL RESEARCH

AT THE 12TH MEETING OF THE SUGAR COMMITTEE
HELD IN SIMLA ON THE 17TH JUNE, 1940.

Addressing the Sugar Committee of the Imperial Council of Agricultural Research, at its twelfth meeting in Simla on June 17, Mr. P. M. Kharegat, C.I.E., I.C.S., Vice-Chairman of the Council, surveyed the position of the Indian sugar industry during the past few years and suggested steps to meet the position which had arisen from over-production. Mr. Kharegat stated:

It gives me great pleasure to welcome you, the members of the reconstituted Sugar Committee, here to-day. I am sure you will wish me to convey our thanks to the members of the previous Committee who are no longer with us for the work done by them in the past.

The Committee had at its last meeting suggested that the next meeting might be held at some place where the members would have a chance of seeing the work that is being done in connection with sugarcane. I am sorry that for various reasons it has not been found feasible to do so this time, but if the members could kindly indicate when they would like the next meeting to be held and where, I shall try to meet their wishes.

As you are aware, a Sugar Conference was held at Simla two days ago. It was concerned primarily with long range problems connected with the industry. There are, however, certain other immediate problems which also require consideration and the most

important of them is that of the present situation in respect of the production of sugarcane and sugar.

The position very briefly is that the production of sugar by vacuum-pan factories in the season that is just over has exceeded expectations; and as a result it may be expected that there will be a carry-over at the end of the season of about 3 to 4 lakhs of tons as against a normal carryover of about $1\frac{1}{2}$ lakh tons. Further, the area sown with cane has increased considerably and in the normal course of events, the production of sugar in the next season will also be heavy and will exceed the consumption by another 3 lakh tons, so that there might be a carryover of between 6 and 7 lakhs of tons in November 1941. It has to be considered as to what steps should be taken about it and how the situation should be met.

Review of Position.

Before dealing with this problem it would perhaps be useful if I were to review briefly the position in respect of the sugar industry in the past few years; in doing so my object is not to go into the question of the responsibility for the present crisis, but simply to recall the actual facts in the hope that these may help us in determining the feasibility or otherwise of various alternative courses of action. In March 1934 the government passed two Acts—one imposing an excise duty on sugar and the other empowering provincial governments to fix a minimum price for cane.

The object of the latter was partly to ensure a fair price to the grower for his cane and partly to avoid the burden of the excise duty being passed on to the canegrower. The governments of the United Provinces and Bihar went into the matter carefully and on the unanimous recommendation of a committee representing all sections of the industry, it was decided to have a minimum price of five annas a maund for cane, so long as the price of sugar remained between Rs. 8 and Rs. 9 and to increase or decrease this minimum price if the price of sugar rose above or fell below these limits. This was in effect a sliding scale for the minimum price of cane, based on the current price of sugar.

This scale worked satisfactorily during the 1934-35 and 1935-36 seasons, and also in the first portion of the 1936-37 season. Towards the end of February 1937 it became clear that there was a bumper crop and that a large area of cane would be left uncrushed, unless factories could be induced to continue as long as possible. It was at

this stage that the excise duty was increased and the factories represented that partly owing to this additional burden and partly to the fact that the cane deteriorates rapidly towards the end of the season, they could not continue to crush the cane at the prevailing price of $4\frac{1}{2}$ annas a maund.

Cut-throat Competition.

In order that cane might not have to be burnt, it was agreed that factories would continue crushing but would pay a lower price for cane varying from 3 to $3\frac{1}{2}$ annas, although there was then no fall in the price of sugar justifying such a reduction. By this arrangement the difficulties of the growers were tided over. But a new situation soon developed for the factories.

They found before long that there was a surplus of sugar some of which had been manufactured at a low price paid for cane and as a result cut-throat competition began among the factories to try and dispose of the same. The result was that the price of sugar dropped to uneconomic levels and the industry was faced with very serious situation.

It was at this stage that some of the factories conceived the idea of forming a Sugar Selling Syndicate. This was started on a voluntary basis and it helped to restore some degree of confidence and sugar prices began to show some little recovery. Almost immediately after, new governments came into power in the United Provinces and Bihar. They emphasised the importance of securing an adequate price to the grower for his cane. After lengthy discussions, the factories agreed that they would be able to pay a fair price to the grower provided membership of the Indian Sugar Syndicate was made compulsory for all factories, the establishment of new factories was restricted and each factory was assigned its own zone of reserved area.

Accordingly a minimum price of five annas per maund of cane was fixed for the season; it was calculated that this should correspond to a price of about Rs. 7 to Rs. 7-4 for sugar. Sugar Factories Control Acts were also passed in both provinces, empowering the governments to compel factories to join a suitable selling organisation, to take out licences for crushing, and to demarcate a reserved area for each factory. As a result the price of sugar rose to the desired level and no difficulty was experienced during the crushing season

Shortage of cane.

During the off-season however the price of sugar began to go up, as it was found that, owing to a poor crop, the quantity of sugar produced was less than had been anticipated. This further rise in the price of sugar had nothing to do with the price of cane. Any way, it was felt that factories had been able to make large and unforeseen profits. At the beginning of the 1938-39 season accordingly, owing to the high price of sugar it was decided to fix a correspondingly high price for cane for the season also, and it was fixed at 0-6-9. In addition a cess was imposed on the sales of sugarcane to factories.

As the season progressed, it became clear that there was an abnormal shortage of cane due to a very bad crop; some factories began to pay a much higher price for their cane and this was followed by government increasing the minimum prices to be paid by other factories in the neighbourhood. The feasibility of trying to control the rise in the price of sugar was examined but this was not then considered to be practicable. Sugar prices continued to rise steadily.

Sliding scale of prices.

After the 1938-39 crushing season was over, the provincial governments appointed a committee to go into the matter. It suggested a new sliding scale, adjusting the price of cane to the current price of sugar as in the years 1934-37. The scale was so contrived that the proportion of profit accruing to the manufacturer from an increase in the price of sugar, decreased when the price of sugar went up. It was hoped that, by this device, the temptation to put up sugar prices would disappear.

When the 1939-40 season began it was found that sugar prices, like those of many other commodities were very high owing to the war. The minimum cane prices fixed by the provincial governments were below the corresponding sliding scale prices but were still at a high level. Thereafter sugar prices went up and the price of cane was also put up accordingly.

Owing to the resulting high price of cane, a large quantity of cane which would have normally gone to the making of gur, was diverted for supply to factories. Special facilities also appear to have been given to cane growers residing at long distances from factories to convey their cane to factories. As a result the amount of sugar

produced has exceeded all expectations and we are confronted with the present situation.

Control of Production.

There are some who appear to think that the situation can be brought under control by the simple expedient of factories controlling their production of sugar during the coming season 1940-41 and producing just enough sugar to meet requirements after making due allowance for the carryover which is anticipated. I submit that this is not a practical proposition. It would mean that crores of manuds of cane may have to be left standing in the fields and burnt; owing to the large area under cane, it will not be feasible to utilise more than a certain proportion of it for gur manufacture and even if gur to this extent could be made, it would not find a market. No government can sit by and allow thousands of acres of sugarcane to be burnt. If government do nothing, there is a serious danger that the cane growers might rise against the factories and serious agrarian trouble might ensue.

If, therefore, anyone is thinking of restricting the production of sugar, I would earnestly request him to abandon the idea as impracticable for the ensuing season. Factories will have to crush, and must be prepared to crush cane to their maximum capacity next season and the problem has to be examined on the understanding that they will do so.

Another course which has sometimes been suggested is that government should withdraw from all interference, repeal the Sugar Factories Control Acts and let things settle themselves in accordance with ordinary economic laws. This again, I fear, is a counsel of desperation. It was just because cane-growers were not getting an adequate price, under the so-called economic laws, that it became necessary to fix a minimum price in 1934. The over-production of 1936-37 was not the result of a high price for cane and it was precisely to prevent a similar crisis again that the Sugar Factories Control Acts were passed; their repeal will not prevent overproduction or help to solve the present problem, whatever changes may be needed either in the Acts or in their administration.

Position of Syndicate.

"Another suggestion that has been put forward is that the Sugar Syndicate should be dissolved; at least it should not be compulsory for

factories to remain members thereof. This proposal seems to be based on the idea that the present situation has arisen largely because of the action of the Syndicate. Whatever opinion one may hold about the responsibility of the Syndicate, I fail to understand how its dissolution will help to solve the present crisis. The immediate result of such action may well be that there will be a scramble on the part of sugar factories to sell their sugar; cut-throat competition will ensue in which the weaker factories will go to the wall; the resulting chaos might help speculators but it will help neither the industry nor the cane-growers.

Dissolving of Syndicate Unwise.

To dissolve an institution established for dealing with a particular type of situation, precisely when such a situation arises on the ground that it did not justify its existence when conditions were different, does not appear to me to be altogether wise. If reorganisation is needed, let that question be looked into; if a new type of institution is called for, let that be established; but to break up the Syndicate at the present stage can only result in confusion and grave hardships to some factories and to many cultivators."

Methods of Solution.

The question then arises as to the lines along which a solution is to be sought for the immediate problem in front of us viz. what to do about the surplus sugar we have in hand and the still larger surplus we expect to have. It seems to me that the situation is difficult but there is no reason to get into a panic about it. There was a big surplus stock in 1937 but within a few months it had almost miraculously disappeared. On the present occasion too, much can be achieved if suitable action is taken (a) to arrange to carry forward the stocks (b) to decrease future supplies and (c) to increase the demand.

The main difficulty about the carrying forward of surplus stocks is the question of finance. It may be possible for the syndicate to approach the proper authorities and arrange for the same. Another problem in this connection is the finding of storage accommodation; this again is a matter for arrangement. There will, of course, be some deterioration in storage as suitable steps will have to be taken to reduce this to a minimum, expert advice being obtained for the purpose.

The situation can be tided over along these lines provided suitable action is taken to see that the carry-over is reduced during the course

of the subsequent years. One step that can be taken for this purpose is to reduce supplies. To do this, it will be necessary to ensure that the area sown with cane which would be available to factories in the next and subsequent seasons is not unduly large. This can be done partly by propaganda undertaken at the right moment, and partly by announcing beforehand a price for sugarcane for the 1941-42 season that will discourage excessive sowings, though still allowing a reasonable margin of profit to cultivators.

In particular, it will be necessary to demarcate more accurately the zones or reserved areas of factories in the United Provinces and Bihar well before the next sowing season; these zones should be small and compact and factories will have to try and bond this cane and aim at getting the greater part of their cane from these zones."

Increased gur output.

Once persons outside the zones clearly realise that there will be little chance of their cane being taken by factories, they will automatically adjust their production accordingly, relying primarily on the demand for gur. Further, some relief may be provided in the coming season, by arranging for the manufacture of gur on a larger scale; it must be realised however that there are limits to the expansion of gur manufacture, partly because of difficulties in dealing with a large quantity of cane in a short time due to the small capacity of crushers, partly because crushers and bullocks may not be available in such large quantities and mainly because it is bound to result in a fall in the price of gur to uneconomic levels.

Action along these lines to adjust the production to the probable consumption must be supplemented by steps taken to increase demand and consumption. In other words more outlets should be found for the sugar produced. The question of the feasibility of India being allowed to export its sugar to the United Kingdom as an emergency measure is, it is understood, being examined and I need therefore say nothing about that, except to point out that it would be safer if the industry were not to count on being able to export any very large quantity of sugar as the price of Indian sugar is higher than that of the sugar produced in many other countries.

Developing Domestic Market.

This emphasises the importance of trying to develop the domestic market and that, in my opinion, is one of the most urgent needs of

the present situation. For this purpose it will be necessary to carry on propaganda to increase sugar consumption. At the same time the internal price of sugar will have to be lowered.

I fully realise the practical difficulties in doing so, considering the price paid for cane. But if by lowering internal prices, an outlet can be found for the surplus sugar available, the question of a fall in the value of stocks and consequent financial implications must be faced. Whether this should be done now or at the beginning of the next season and what a suitable reduction would be are matters of detail into which I need not go at present.

Cumulative Effect of suggestions appreciable.

In short, it seems to me that, though no single line of action may by itself solve the problem, the cumulative effect of the various suggestions made might well be appreciable. Let me recapitulate the various suggestions that have been put forward making it clear that the views expressed are my own and not those of government which may in many particulars be different. Factories must crush cane in the coming season to the maximum extent possible. Suitable financial accommodation has to be obtained to enable stocks to be carried forward and arrangements must be made for storage and intensive research carried on to evolve suitable methods for the purpose.

Future supplies can be decreased by adjusting the area sown in 1941, so that ultimately the stocks can be reduced to a reasonable level; this has to be supplemented by the proper demarcation of reserved area, the fixation of the minimum price of cane, if possible before the crop is sown and an attempt to manufacture as much gur as can be done economically.

Finally, demand must be increased partly by exporting a portion of the surplus if this is feasible, partly by propaganda and mainly by bringing down the price of sugar either now or at the beginning of the next season to a level which will encourage greater consumption and help to reduce stocks. If for any reason a suitable price for sugar cannot be fixed directly by the Sugar Syndicate and the selling organisations with which it deals (though there is no reason why this should not be done), an indirect check can be provided by suitable adjustments of the tariff import duty.

Closer Liaison Needed.

"Above all, what is wanted is a closer liaison between the various interests concerned—the cane growers, the manufacturers and their Syndicate, the merchants whose business it is to find a market for sugar, and the Governments, both Provincial and General.

"I am afraid I have taken up a lot of time dealing with the question of over-production, but the subject to my mind is so vital for the welfare of the industry, including the cane grower, that it must receive our full consideration. It must not be forgotten however that there are several other important matters for us to consider.

Continuation of Caneppore Sugar Institute.

There is the question of the continuation of the Sugar Institute and the lines along which it should work in future. Research to ascertain the best methods of storage appears to be an urgent necessity and more work appears to be called for in connection with the technological aspects of different kinds of canes at different periods and stages. This will have to be correlated with the work of the all-India Sugar Station which is contemplated for dealing with research on the agricultural aspect of cane cultivation; the plan and programme of work for such a station as well as for its regional stations will also have to be worked out.

STATISTICAL TABLES

IN

“The Sugar Industry at a Glance,”

(1940)

(Revised up to 20th March, 1941)

TABLE NO. 1

*Number of Cane factories working in India, including States, and
Production of Sugar from Cane Factories, Gur Refineries,
Khandsari; Net Import of Sugar in British India and
Import in Kathiawar Ports during the last 9 years,
and estimates for 1940-41 and 1941-42.*

Year (November October)	No. of cane factories working in India	Cane Factory Production (November- October)	Sugar Refined from Gur (Janu- ary-December)*	Khandsari (Con- jectural estimates (Nov.-Oct.)	Total Production of sugar in India (Nov.-Oct.)	Net Import (Excluding Re- exports) of Sugar in British-India (Nov.-Oct.)	Import of Sugar in Kathiawar Ports (Nov.-Oct.)
		(Tons)	(Tons)	(Tons)	(Tons)	(Tons)	(Tons)
1931-32	32	158,581	69,539	250,000	478,120	438,797	92,678
1932-33	57	290,177	80,106	275,000	645,383	321,081	68,649
1933-34	112	453,965	61,094	200,000	715,059	233,366	87,004
1934-35	130	578,115	39,103	150,000	767,218	197,775	113,364
1935-36	137	932,100	50,067	125,000	1,107,167	86,962	45,218
1936-37†	137	1,111,400	19,500	100,000	1,230,900	11,960 †	12,870
1937-38	136	930,700	16,600	125,000	1,072,300	9,410	12,284
1938-39*	139	650,800	14,200	100,000	7,65,000	254,400	76,819
1939-40	145	1,241,700	31,700	100,000	1,373,400	35,260 *** (11 months)	28,854 (5 Months) ††
1940-41**	148	975,000	50,000	125,000	1,150,000	5,000	..
1941-42**	150	850,000	25,000	100,000	975,000	(Our estimates)	...

*Figures of gur production for calendar year 1932 are added to figures for 1931-32, and so on.

**Our estimates.

†Factories in Burma, and production of sugar in Burma, are excluded from 1936-37 season.

‡Imports in Burma excluded from April, 1937 onwards.

***Figures of Gross Imports (not net) only available; Statistics discontinued.

††Statistics discontinued from March, 1940.

TABLE NO. 2

Comparative growth of the Sugar Industry in the various Provinces since 1931-32.

Province	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41 (Est.)
(No. of cane-factories working)										
U. P.	14	33	59	65	67	68	68	69	70	71
Bihar	12	19	33	34	35	33	33	32	32	32
Punjab & Sind	1	1	5	6	4	5	3	3	3	3
Madras	2	2	4	8	8	11	8	7	10	10
Bombay	2	1	4	5	6	6	7	7	7	8
Bengal	2	5	6	6	6	8	9	9
Orissa	2	2	2	2
Indian States	4	5	9	8	9	11	11	13
Total for India	32	57	112	130	137	137	136	139	145	118
Burma *	1	1	1	2	2	3	2	2	3	3

*Burma Excluded from 1936-37 onwards from the total for India.

TABLE NO. 3

*No. of sugar factories in various Provinces, working in 1939-40,
Estimated quantity of cane crushed, sugar produced and
Recovery percentage obtained etc.*

*(Official Estimates of the Director, Imperial Institute of Sugar
Technology, Cawnpore, published on 3rd October, 1940.)*

Province	No of Mills Working	Cane Crushed Tons	Sugar Made Tons	Recovery Sugar per cent cane 1938-39	Recovery Sugar per cent cane 1939-40
United Provinces	... 70	7,034,100	659,500	9.14	9.37
Bihar	... 32	3,466,100	322,100	9.00	9.29
Punjab & Sind	... 3	175,100	14,700	8.62	8.39
Madras	... 10	343,300	31,300	9.37	9.11
Bombay	... 8	631,600	69,300	11.29	10.97
Bengal & Assam	... 9	430,000	39,709	7.55	9.23
Orissa	... 2	27,400	2,300	7.87	8.39
India	... 11	1,024,100	102,800	9.83	10.03
Total (India)	... 145	13,131,700	1,241,700	9.29	9.45
Burma	... 3	265,000 (Est)	27,700	9.90	10.4

TABLE NO. 4

Sources of supply of Sugar required for Consumption in India.
(November-October) from 1931-32 to 1939-40.

PARTICULARS	1931/32	1932/33	1933/34	1934/35	1935/36	1936/37†	1937/38	1938/39	1939/40
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Initial Stock :									
(1) In Ports	31,510	19,176	9,057	21,630	11,189	23,684	22,000	(our Est) 20,000	(our Est) 51,000
(2) In Principal Land markets	8,366	7,994	5,390	15,000	15,000	25,080
(3) With factories	4,000	130,300	170,000	67,000	...
Production of Sugar :									
(a) Direct from cane	158,581	290,177	453,965	578,115	932,107	1,111,400	930,700	650,800	1,241,700
(b) Refined from Gur	61,990	77,995	64,890	43,600	47,878	25,600	17,200	12,200	14,200
(b) Khandasaris	250,000	275,000	290,000	150,000	125,000	100,000	125,000	100,000	1,00,000
Imports of Sugar by Sea	443,200	324,400	245,300	200,100	95,800	16,001	8,986	234,400	36,000
Imports of Sugar by Sea into Kathiawar Ports	98,000	64,000	87,094	113,400	45,200	12,870	12,238	90,600	28,000
TOTAL SUPPLY	1,038,281	1,050,748	1,060,306	1,115,111	1,263,159	1,424,865	1,301,124	1,209,200	1,495,990
Re-Export of sugar by Sea	4,414	587	11,900	2,157	6,206	5,533	131	2,000	...
Re-Export of sugar by Sea	382	3,356	434	357	449	10,640	8,668	7,000	...
Export of sugar by Land	32,000	31,957	30,607	29,939	27,667	35,064	31,100	30,000	70,000
(Estimated)									
Closing Stock :									
(1) in ports	19,176	9,057	21,630	11,189	23,684	22,000	20,000	51,000	12,800
(2) in principal inland markets	7,994	5,390	15,000	15,000	25,000	24,000
(3) with factories	4,000	130,300	170,000	67,100	25,000	400,000
Total to be deducted	55,972	44,957	64,571	51,636	193,336	238,237	141,839	144,000	5,06,800
Quantity consumed to the nearest thousand	982,000	1,006,000	996,000	1,059,000	1,074,000	1,167,000	1,159,000	1,083,000 (Our Estimate)	9,88,000 (Our Est)

* Vide The Review of the Sugar Trade of India, for the year 1938-39, published with the Indian Trade Journal, dated 30th May, 1940. For statistics of production, imports etc. for 1939-40 see previous tables.

† Burma has been excluded since 1936-37.

TABLE NO. 5

*Total, and per capita Consumption of Sugar, and Gur in India.**

Year (Nov- Oct)	Consumption of sugar in tons.	Official Estimate	Consumption of Gur in tons.	Per Capita Consumption in lbs.		
				Sugar	Gur	Total of Sugar & Gur
				lbs per head	lbs per head	lbs per head
1931-32	982,000	"	2,758,000	6.2	17.2	23.4
1932-33	1,006,000	"	3,240,000	5.8	20.2	26.0
1933-34	996,000	"	3,486,000	5.8	21.6	27.4
1934-35	1,059,000	"	3,701,000	6.5	22.7	28.9
1935-36	1,074,000	"	4,101,000	6.5	26.7	33.2
1936-37	1,167,000	"	4,268,000	7.3	24.9	34.2
1937-38	1,159,000	"	3,364,000	7.1	21.0	28.1
1938-39	1,065,000	(Our est.)	2,131,000	6.6	13.0	19.6
1939-40	950,000	"	2,80,000	5.7 (Our est.)	18.0	23.7

*Vide the Review of the Sugar Trade of India, for the year 1938-39, published with the Indian Trade Journal dated 30th May, 1940.

The total value of the sugar, including *gur*, produced in 1938-39 may be estimated at Rs. 800,000,000, and in 1939-40 at about about Rs. 100,000,000.

TABLE NO. 6

Per Capita Consumption of Sugar in other Countries in 1938-39.

Great Britain	112 lbs. per head
U. S. A.	103 " "
New Zealand	115 " "
France	54 " "
Australia	114 " "
Denmark	128 " "
Germany	59 " "
Cuba	88 " "
Java	11 " "
Japan	29 " "
India	20 (Including Gur).

TABLE NO. 7

*Yearly World Production, Consumption, and the Carry-over of stocks of Sugar for the last 9 years in thousand tons (Raw Sugar Value)**

Crop year (Sept. 1st to Augt. 31st)	Opening Stocks (Sept. 1st)	Production	Consump- tion	Closing Stocks (August 31st)	Percentage relation of stocks to Consumption
1931-32	12,362	26,431	26,724	12,069	45.2
1932-33	12,069	24,692	26,193	10,568	40.3
1933-34	10,568	25,709	26,287	9,990	38.0
1934-35	9,990	26,191	27,188	8,993	33.1
1935-36	8,993	28,846	29,231	8,608	29.5
1936-37	8,608	30,818	30,549	8,877	29.1
1937-38	8,877	30,967	29,647	10,197	34.4
1938-39	10,197	29,642	29,406	10,516	35.9
1939-40					

*Figures are in long tons (Long ton=2,240 lbs.) (Metric ton=2,205 lbs.), and (short ton=2,000 lbs.)

Vide Lamborn's Sugar Statistical Bulletin, dated New York, 25th February, 1939, and June 11, 1940.

A glance at the last Table in the 1940 Annual will show that India leads as the largest sugar producing country in the world, since 1931.

TABLE NO. 8

*Average and Maximum Percentage of Recovery of Sugar in Factories in India, and Java, since 1931-32.**

	India	U. P.	Bihar	Bombay	Java	India
Year	Average	Average	Average	Average	Average	Maximum
1931-32	8.89	8.59	9.06	10.46	10
1932-33	8.66	8.55	8.60	10.00	11.15	10
1933-34	8.80	9.08	8.32	10.00	12.64	10
1934-35	8.66	8.56	8.79	10.37	12.35	11.10
1935-36	9.29	9.60	8.93	10.47	13.21	11.34
1936-37	9.50	9.65	9.20	10.68	11.72	11.43
1937-38	9.38	9.18	9.58	10.97	11.40	11.63
1938-39	9.29	9.14	9.00	11.29	12.25
1939-40	9.45	9.37	* 9.29	10.97	12.31

*Vide Trade Journal, Calcutta, 3rd October, 1940.

TABLE No. 9

*Capacity of Factories and Duration of Crushing Season in India.**

	Tons	
Average Cane-crushing capacity of • Facto (calculated on the basis of tons of cane crushed per day of actual working) in India	517	1934-35
	568	1935-36
	630	1936-37
	660	1937-38
	630	1938-39
	710	1939-40
Maximum cane-crushing capacity of Factories per day in India	2,012	1934-35
	1,807	1935-36
	1,960	1936-37
	2,000	1937-38
	1,850	1938-39
	1,960	1939-40

Duration of Cane-Crushing Season (Oct.-May)	1932-33 No. of days	1933-34 No. of days	1934-35 No. of days	1935-36 No. of days	1936-37 No. of days	1937-38 No. of days	1938-39 No. of days	1939-40 No. of days
<i>Mean duration of Cane-crushing season in All-India</i>	138	106	104	126	138	112	83	129
<i>Maximum duration of Cane-crushing season in All-India</i>	184	208	172	179	203	181	184	203
<i>Mean duration of Cane-crushing season in U. P.</i>	136	112	107	134	140	124	77	133
<i>Mean duration of Cane-crushing season in Bihar</i>	149	105	109	124	150	99	79	136
<i>Mean duration of Cane-crushing season in "All other Provinces"</i>	112	84	90	112	138	103	97	119

* *Vide* Indian Trade Journal, Calcutta, dated 3rd October, 1940, and previous issues.

TABLE NO. 10

*Acreage under Sugar-cane, under improved Varieties, Production of Cane per Acre, Gross production of Gur, and Calculated Production of Cane-crop.**

Year	Total acreage under sugarcane in thousand acres	Acreage under improved varieties in thousand acres	Average cane production per acre (in tons)	Gross production expressed as gur (in thousand tons)	Calculated production of sugar cane (10-11 factors) (in thousand tons)
1930-31	2,905	817	12.3	3,359	35,780
1931-32	3,076	1,170	14.1	4,116	43,316
1932-33	3,425	1,845	14.9	4,859	51,129
1933-34	3,422	2,295	15.3	5,055	52,455
1934-45	3,602	2,433	15.1	5,292	54,346
1935-36	4,154	3,056	15.3	6,102	61,202
1936-37	4,582	3,452	15.6	6,932	67,322
1937-38	3,869	2,968	15.5	5,579	55,637
1938-39	3,130	2,673	15.0	4,275	43,100
1939-40	3,705	2,800 ^(our Est)	15.0	—	50,000
1940-41	4,244	—	—	—	—

TABLE NO. 11

Percentage of Cane used under different heads during the years 1932-33 to 1938-39.

*(November-October)***

	1932-33	1933-34	1934-35	1935-36	1936-37	1937-† 38	1938-39	1939-40
	(Our Est)			(Our Est)			(Our Est)	(Our Est)
Cane used in factories	6.5	9.8	12.3	16.0	17.6	17.8	16.2	26.0
Cane equivalent of gur used in refineries	3.0	2.0	1.2	1.4	0.5	0.5	0.5	0.5
Cane used for gur manufacture	64.7	65.5	61.0	63.8	64.9	62.0	64.0	56.0
Cane used for other purposes, including Khandsari, Chewing, setts for planting etc.	25.8	22.7	20.5	18.8	16.9	19.7	19.3	17.5
Total percentage	100	100	100	100	100	100	100	100

*Vide Trade Journal, 30th May, 1940. The yield of Gur per acre has increased from .80 tons in 1901-02 to 1.47 tons per acre, due to improved varieties of cane.

**Vide Reply in the Assembly to Question No. 807, dated 7th March, 1939.

†Excluding Burma.

... TABLE NO. 12

Percentage of cane crushed in factories to the total cane-crop in various Provinces.

Season	U. P.	Bihar	Bombay	Bengal	Madras	India
1934-35	13.2	30.9	8.0	2.7	5.0	12.3
1935-36	16.3	40.4	11.7	4.8	5.4	16.0
1936-37	15.6	49.3	13.0	5.2	6.0	17.6
1937-38 (Our Est)	23	62.3	14.0	17.8
1938-39	22	44.5	16.2
1939-40	33	71.1	26.9

TABLE NO. 13

Cost of Production of Cane per maund.

- (a) Definite figures are not available. Cost of production varies from Province to Province from annas 0-3-0 to annas 0-7-0 per maund. (*Vide* 1939 annual).
- (b) Average cost of Production of Cane in Bihar, according to Bihar Government figures for 1936-37 was roughly between 2½ and 3½ annas per maund.
- (c) Enquiry undertaken by the Imperial Council of Agricultural Research in 1934, is concluded. Reports of cost in various Provinces published in 1938, and 1939, and also referred to in Tariff Board's Report (1937).

TABLE NO. 14

Estimate of total amount of money paid by Sugar Factories, to Cane-Cultivators, and Workers since 1931-32.

Season	Estimated Average price per maund of cane in U. P. & Bihar	Estimated amount paid for cane by factories to Cultivators (1)	No. of unskilled workers em- ployed (2)	Estimated amount of money paid to unskilled workers (3)
	Rs. As. P.	Rs.	No	Rs.
1931-32	0 5 10	1,77,51,000	16,640	998,000
1932-33	0 5 6	3,14,39,000	29,640	1,778,000
1933-34	0 5 6	4,83,98,000	67,200	4,032,000
1934-35	0 5 3	5,97,66,000	78,000	4,680,000
1935-36	0 5 3	8,78,02,000	82,200	4,932,000
1936-37	0 4 0	7,80,00,000	100,000	6,000,000
1937-38	0 5 3	8,80,00,000	100,000	6,000,000
1938-39	0 7 0	8,50,00,000	100,000	6,000,000
1939-40	0 8 9	1,50,000,000	100,000	7,000,000

- (1) Based on statistics received from a large number of factories in U. P. and Bihar.
- (2) Based on an assumption of an average factory employing about 600 workers.
- (3) Based on an estimate of payment of 0-8-0 per day, on an average working period of 120 days.

TABLE NO. 15 & 16

Minimum cane-price schedules in U. P. and Bihar in 1934-35, 1935-36, 1937-38, 1938-39, 1939-40 and 1940-41.

The minimum price for the purchase of cane was fixed by Legislation in U. P. and Bihar for the first time during 1934-35, with a view to secure a fair price to the growers, under Sugar Cane Rules framed under the Sugarcane Act, 1934.* The following schedules which were adopted by the respective Provinces for fixing the minimum price of cane for each fortnight according to variations in the price of sugar, during the season 1934-35 continued to operate in 1935-36, and in 1936-37, provision was also made for minimum price of cane corresponding to an average price of sugar between Rs. 6 and Rs. 6-8 in view of the fall in price of sugar during 1936-37.

Fortnightly varying sliding scale of cane-prices, in operation from 1934-35 up to 1936-37.

BIHAR				THE UNITED PROVINCES			
Average price of sugar		Corresponding Minimum price of Sugarcane intended for use in		Average price of sugar		Corresponding Minimum price of Sugarcane intended for use in	
		Open Pan Factories	Vacuum Pan Factories			Open Pan Factories	Vacuum Pan Factories
Rs. As.	Rs. As.	As. P.	As. P.	Rs. As.	Rs. As.	As. P.	As. P.
Above	To			Above	To		
6 0	6 8	2 3	4 0	6 0	6 8	2 3	4 0
6 8	7 0	2 6	4 3	6 8	7 0	2 10	4 3
7 0	7 8	2 8	4 6	7 0	7 8	3 0	4 6
7 8	8 0	2 10	4 9	7 8	8 0	3 2	4 9
8 0	8 12	3 0	5 0	8 0	9 0	3 4	5 0
8 12	9 4	3 2	5 3	9 0	9 8	3 6	5 3
9 4	9 12	3 4	5 6	9 8	10 0	3 8	5 6
9 12	10 4	3 6	5 9				

Irreducible Minimum Price for the entire season in 1937-38.

During the 1937-38 season, the minimum price for cane was not fixed every fortnight varying with the price of Sugar. The minimum cane price schedule which was in force till 1936-37 was abolished in the beginning of 1937-38. In Bihar and U. P. the irreducible minimum price of sugar cane fixed for the entire season of 1937-38

*Act repealed in U. P. and Bihar in 1938. U. P. and Bihar Sugar Factories Control Act, and Rules introduced in 1938. These have been Subsequently amended.

at annas 0-5-3 per maund for gate cane, and annas 0-5-0 per maund for rail-borne cane.

Minimum Cane-price in U. P. and Bihar in the 1938-39 season.

In November 1938 the Governments of U. P. and Bihar issued Notifications (8683-A/R11A dated 17th November, 1938, and No. 2017-D dated 16th November, 1938) respectively, announcing the minimum cane price for Vacuum Pan factories during the whole crushing season 1938-39. The following were the cane prices thus fixed :—

	per std. md. of 82-2½ lbs.	Rs.	A.	P.
1. Cane purchased at the factory (or within a radius of 5 miles therefrom in Bihar only) ...		0	6	9
2. Cane purchased at outstations and transported by railway or other means at the cost of the factory for distances exceeding 5 miles but not exceeding 28 miles ...		0	6	6
3. Cane purchased at outstations and transported by railway or other means at the cost of the factory for distances exceeding 28 miles ..		0	6	3

On the 13th January, 1939, Government of U. P. increased the minimum price of sugar-cane, with effect from January 15, 1939, upto 0-7-9, and with effect from 3rd March, upto 0-8-9, due to a rise in the price of sugar. The Bihar Government increased cane-prices from February, 1939, upto 0-7-0 per maund.

Madras also fixed minimum price in one area.

During 1938-39, in the Province of Madras in the Hospet area, the Government fixed a minimum price of cane at about Rs. 9-8 per ton, roughly equivalent to 0-5-7 per maund. During 1939-40 the minimum price in the Hospet area was fixed at Rs. 12 per ton for all varieties of cane. In Mysore, the minimum price was fixed, varying with the price of sugar, in 1939-40, as in the previous years.

Mysore fixes minimum price.

The Mysore Government fixed a minimum price of Rs. 12 per ton on all cane supplied from February 1940 to the end of May 1940. From August 1940 the minimum price was reduced to Rs. 11|- ton and further reduced to Rs. 10|- per ton from October 1940.

Cess on Cane at 0-0-6 per maund and revenue therefrom.

The Government of U. P. and Bihar levied a cess on all sugar cane purchased by factories, with effect from the 1938-39 season,

commencing from 16th November, 1938. The revenue derived from the cane-cess in 1938-39 in the U. P. was Rs. 27,81,280 and in Bihar Rs. 14,34,000. In 1939-40, the revenue from the cane-cess in U. P. amounted to Rs. 40,04,350|- and in Bihar to Rs. 17,86,000|-. The revenue from this source has not been funded or assigned either in U. P. or Bihar. It is understood, however, that large sums are spent annually on sugar cane and its development and also on roads particularly in the vicinity of factories.

*Minimum Price of cane recommended by Sub-committee in
U. P. and Bihar in 1939-40.*

At a meeting of the U. P. and Bihar Sugar Control Board held at Patna on the 29th April, 1939, a Sub-Committee was appointed to report *inter alia* on the scheme of minimum price of sugarcane, and to consider the feasibility of a sliding scale of cane and sugar prices. This Sub-Committee consisting of two representatives of the Government, two representatives of the manufacturing interests, and two representatives of cane cultivating interests met at Nainital on 18th June, 1939 and recommended to the Sugar Control Board for adoption, the following sliding scale of minimum price of sugar-cane linked with the price of sugar :—

<i>Price of sugar per maund</i>				<i>Price of cane per md.</i>			
Rs.	A.	P.		Rs.	A.	P.	
7	12	0	and under	...	0	5	0
7	12	0	to Rs 8 0 0	...	0	5	3
8	0	0	" " 8 4 0	...	0	5	6
8	4	0	" " 8 8 0	...	0	5	9
8	8	0	" " 8 12 0	...	0	6	0
9	0	0	" " 9 4 0	...	0	6	6
9	4	0	" " 9 8 0	...	0	6	9
9	8	0	" " 9 12 0	...	0	7	0
9	12	0	" " 10 0 0	...	0	7	3
10	0	0	" " 10 4 0	...	0	7	6
10	4	0	" " 10 8 0	...	0	7	9
10	8	0	" " 10 12 0	...	0	8	0
10	12	0	" " 10 15 0	...	0	8	3
10	15	0	" " 11 2 0	...	0	8	6
11	2	0	" " 11 5 0	...	0	8	9
11	5	0	" " 11 8 0	...	0	9	0
11	11	0	" " 11 14 0	...	0	9	6
11	14	0	" " 12 1 0	...	0	9	9

*The price refers to gate-cane.

The basis of calculation of sugar prices will be the same as when the previous sliding scale was in use (*i.e.* in 1936-37).

The scale was unanimously accepted on the assumption of the existing rates of sugar excise, viz. Rs. 2 per cwt., Cess viz. 0-0-6 per maund of cane, and co-operative commission (for supply of cane to factories varying from 0-0-1 to 0-0-3 per maund) being maintained.

As a result of the unanimous recommendation of such a sliding scale, the Government of U. P. and Bihar decided to abandon their previous practice of fixation of a non-varying minimum price of cane for the entire season, and to re-introduce a system of fixing the minimum price of cane, every fortnight, varying with the price of sugar according to the above sliding scale or such modifications thereof as they wished to make, with effect from the commencement of the cane crushing season in November, 1939.

As has been stated above, during the season 1934-35, 1935-36 and 1936-37, cane prices were fixed fortnightly in U. P. and Bihar according to the then accepted schedule, which was more favourable to the manufacturers than the schedule in force in 1939-40.

Minimum Cane-price Sliding Scale adopted by Bihar and U. P. in 1939-40

On 27th October, 1939, the U. P. Government issued the following Press note in connection with fixation of minimum price of cane.

The Sugar Control Board appointed a Sub-Committee to examine the question of suitable minimum sugarcane prices payable by vacuum pan factories, and this Sub-Committee, which included representatives both of sugar manufacturers and cane growers, unanimously recommended that the minimum price for sugarcane should be fixed every fortnight in accordance with a sliding scale linking the cane price to the average price of sugar calculated as formerly on the basis of the ten highest price quotations at Cawnpore* for first grade sugar manufactured in the United Provinces for delivery by factories on an F. O. R. basis. The Government have accepted this recommendation, but have on consideration of all the relevant circumstances slightly

*This was amended on 7th December, 1939, and instead of ten highest prices, "the average of all available market quotations of first grade sugar" was taken.

modified the scale of sugarcane prices recommended by the Sub-Committee. The scale decided upon by the Government was as follows:—

	Rs. A. P.		Rs. A. P. Per maund of sugar		Rs. A. P. Per maund of cane
Under	7 10 0				0 5 0
	7 10 0	to under	7 14 0		0 5 3
	7 14 0	" "	8 2 0		0 5 6
	8 2 0	" "	8 6 0		0 5 9
	8 6 0	" "	8 10 0		0 6 0
	8 10 0	" "	8 14 0		0 6 3
	8 14 0	" "	9 2 0		0 6 6
	9 2 0	" "	9 6 0		0 6 9
	9 6 0	" "	9 10 0		0 7 0
	9 10 0	" "	9 14 0		0 7 3
	9 14 0	" "	10 2 0		0 7 6
	10 2 0	" "	10 5 0		0 7 9
	10 5 0	" "	10 8 0		0 8 0
	10 8 0	" "	10 11 0		0 8 3
	10 11 0	" "	10 14 0		0 8 6
	10 14 0	" "	11 1 0		0 8 9
	11 1 0	" "	11 4 0		0 9 0
	11 4 0	" "	11 7 0		0 9 3
	11 7 0	" "	11 10 0		0 9 6
	11 10 0	" "	11 13 0		0 9 9
	11 13 0	" "	12 0 0		0 10 0

On the 7th December 1939 the U. P. and Bihar Governments decided to make an allowance of -4|6 per maund of sugar on account of the rise in the price of raw materials as a result of the war and to deduct this amount from the average sugar quotations before correlating it to the price of the cane.

After the increase in the excise duty on sugar from Rs. 2|- to Rs. 3|- per cwt. with effect from the 1st March, 1940, the U. P. and Bihar Governments decided to reduce the minimum price of cane by 9 pies per maund (working out the cane prices in accordance with the schedule which remained unaltered).

From 11th April, 1940, the practice of fixing minimum price of cane with reference to the sliding scale schedule given above was abandoned and the price of cane was fixed at a flat rate with a provision

for payment of a higher price of cane to the cultivators if the factories were able to sell sugar at a higher rate thus introducing virtually the system of *deferred payment* for cane.

Opening Minimum cane-prices in 1939-40.

The minimum price for sugar cane for the period from November 1 to 15, 1939, was fixed as follows in the U. P. :—

	Per	st.	md.
For purposes at the factory	0	8 9
For purchases at Railway Stations within 28 miles	0	8 6
For Purchase at Railway stations beyond 28 miles.	0	8 3

The minimum cane-prices in Bihar from 1st November to 15th November, 1939, as follows :—

Price per Standard maund of
82-2/7 lbs. avoirdupois.

- (i) Cane purchased at the factory or within a radius of 5 miles therefrom ... Eight annas & nine pies.
- (ii) Cane purchased at outstations and transported by railway or other means at the cost of the factory for distances exceeding 5 miles but not exceeding 28 miles ... Eight annas & six pies.
- (iii) Cane purchased at outstations and transported by railway or other means at the cost of the factory for distances exceeding 28 miles. Eight annas & three pies.

The above prices were exclusive of the cane-cess of 0-0-6 per maund, both in U. P. and Bihar.

Minimum Sugar cane prices in 1939-40 season.

For ready reference we are giving a table showing the cane prices per maund in U. P. and Bihar for the entire 1939-40 season at a glance :—

TABLE NO. 16
Cane Prices in 1939-40 at a Glance.

DATE	U. P.	Cane Prices.			Deduction Granted.		
		Rs.	As.	P.	Rs.	As.	P.
November 1 to December 15, 1939	..	0	8	9	...		
December 16 to December 31, 1939	...	0	9	9	0	0	6*
January 1 to January 15, 1940	...	0	10	9	0	0	9*
January 16 to January 31	..	0	10	3	{ 0 0 9*		
					{ 0 0 6 (1)		
February 1 to February 15	..	0	10	0	{ 0 0 9*		
					{ 0 0 6 (1)		
					{ 0 1 0 (2)		
February 16 to February 29	..	0	9	9	{ As in the first		
March 1 to March 2	...	0	9	9	{ fortnight of		
March 3 to March 15	...	0	9	0	{ February.		
March 16 to March 31	...	0	9	0	{ 0 0 6*		
					{ 0 0 6 (1)		
					{ 0 0 9 (2)		
April 1 to April 10	..	0	8	9	As in the pre-		
					vious fort-		
					night.		
April 11 to April 30	...	0	6	3	{ 0 0 9 (1)		
May 1 onwards	...	0	5	6	{ 0 0 9 (2)		

*For the districts of Bahraich, Gonda, Fyzabad, Gorakhpur, Basti, Azamgarh and Ballia. Relief is for all cane.

(1) Relief for "Desi" cane in Basti and Gonda districts between 26-1-40 to 31-5-40 and in Gorakhpur districts between 3-2-40 to 31-5-40.

(2) Relief in Gonda district only.

BIHAR.

DATE		Cane Prices.			Deduction Granted.*		
		Rs.	As.	P.	Rs.	As.	P.
November 1 to December 15, 1939		0	8	9			
December 16 to December 31, 1939	...	0	9	9	0	0	6*
January 1 to January 15, 1940	...	0	10	6	0	0	6*
January 16 to January 31	...	0	10	3	{ 0 0 6 (a)		
					{ and		
					{ 0 1 6 (b)		
February 1 to February 15	..	0	10	0	{ 0 0 6 (a)		
					{ and		
					{ 0 1 6 (b)		
February 16 to February 29	..	0	9	9	0	1	6 (b)
March 1 to March 2	..	0	9	9			
March 3 to March 15	...	0	9	0			
March 16 to March 31	...	0	9	0			
April 1 to April 10	...	0	8	9			
April 11 to April 30	...	0	6				
May 1 onwards	...	0	5	6			

The above prices were exclusive of the cess on cane of 0-0-6 per md. levied from the commencement of this season in 1939-40 up to 10th April, 1940 after which the Governments decided to forego the cess.

*For the districts of Champaran, Saran, Durbhanga and Muzaffarpur. From 17-12-39 to 11-1-40.

(a) For the Sadar Sub-division of the district of Saran and the districts of Durbhanga and Muzaffarpur from 12-1-40 to 31-1-40.

(b) For the Bettiah Sub-division of the district of Champaran and Gopalgunj Sub-division of the district of Saran from 12-1-40 to 29-2-40.

N.B.—Relief is for Co. 210 and Co. 213 cane.

**Non-varying cane-price in the 1940-41 Season, in
U. P. & Bihar.**

The Governments of U. P. and Bihar decided to fix a non-varying minimum price for the purchase of cane for the entire season, thus abandoning the previous practice of varying the minimum prices of cane according to the sliding scale in use during the season 1939-40. The Government of Bihar issued a notification on the 4th December fixing the minimum price of cane during the crushing season 1940-41 at 0-4-6 per maund. The Government of U. P. issued a notification on 6th December fixing the minimum price of cane at 0-4-6 per maund with effect from 15th December, 1940. On the 23rd December the Government of Bihar issued a notification fixing the minimum price of cane at 0-4-3 per maund with effect from the 23rd December, 1940 for the crushing season 1940-41, while the Government of U. P. issued a notification on the same date reducing the minimum price of cane to 0-4-3 per maund for factories situated in Gorakhpore, Gonda, Bahraich, Basti and Fyzabad Districts to 0-4-3 per maund. The minimum price of cane in the other Districts was kept at 0-4-6 per maund.

Difference in prices between gate-cane and rail-cane abolished.

It must be noted that the difference prevailing between gate-cane and rail cane hitherto has been abolished and the same price is fixed both for gate-cane and rail cane.

Cane cess and additional cess on cane.

For the 1940-41 season the Government of Bihar issued a notification on the 25th November fixing the cess of 9 pies per maund on all cane purchased by factories in Bihar (out of this 9 pies, 0-0-3 represented the usual cane cess and 0-0-6 represented the repayment of the excise loan given to factories last year). The Government of Bihar issued a further notification on the 23rd December increasing the cess from 9 pies per maund to 12 pies per maund (0-0-6 per maund being the cess on cane and 0-0-6 per maund being the repayment of the excise loan) and reduced the cane prices as stated above by 3 pies per maund. The Government of U. P. issued a notification on the 6th December announcing the levy of a cess on cane at the rate of 3

pies per maund together with an additional cess of 6 pies per maund being the repayment of the excise loan given last season to the factories and they issued a further notification on the 23rd December announcing the cane cess at 12 pies per maund 6 pies being the cess on cane and 6 pies being the additional cess for cane purchased by all factories in the Province. The Government of U. P. reduced the cane prices in the few districts stated above to 0-4-3 per maund with effect from 24th December, 1940. The minimum price of cane in the other districts in U. P. was fixed at 0-4-6 per maund.

The total cess on cane in 1940-41 was 0-1-0 per maund.

We may explain here that the reason of the U. P. Government for reducing the price of cane in the districts mentioned above was that there was likely to be a considerable amount of cane left standing in those areas when the quotas of canes allotted to factories has been crushed. The price of cane in those areas was therefore reduced and the cane cess raised by 3 pies so that the proceeds of this extra cess of 3 pies might form the nucleus of a fund to which the Governments would respectively contribute and from which compensation would be paid to tenants whose cane was left standing at the end of the season.

A reduction of 0-0-6 per maund of cane was given in March, 1941, to some factories in Bihar which drew their cane from areas where there was surplus cane.

TABLE NO. 17

Import Duties on Sugar in the Principal Countries in the World.

As there have been so much changes due to the war in regard to the duties on sugar in the various countries, we are not giving the table here. A reference may be made to the 1939 Annual for the import duties on sugar then existing.

India (1941)

Total Import Duty (with equivalent excise duty)	Rs. 9-12-0 per cwt.
	equivalent to (Rs. 7-2-9) per maund
Excise Duty on factory sugar	Rs. 3-0-0 per cwt.
in British India	equivalent to (Rs. 2-3-3) per maund

The present import duty will continue till 31st March, 1942.

TABLE NO. 18.

Quantity and value of Imports of Sugar (excluding re-exports and Molasses) in India in Tons (Net Figures)
from 1929-30 to 1939-40 (April-March).*

Province	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	1939-40
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons†	Tons†	Tons (Gross imports)
Burma	42,630	40,162	28,335	26,391	19,649	17,428	16,231	3,926
Madras	90,899	88,610	78,201	53,782	53,884	49,793	39,314	189	(Excess re-export of 128 tons)	5,010	39,261
Bombay	211,027	212,847	128,884	111,346	97,408	80,063	80,731	276	2,572	12,239	92,582
Sind	218,700	230,589	109,391	85,618	59,822	50,282	42,524	3,903	9,206	13,182	45,338
Bengal	368,969	330,581	165,645	88,570	19,022	22,557	19,386	5,685	1,048	3,039	69,480
Total (British India) Tons	932,285	897,788	510,456	365,707	249,785	220,123	198,186	13,979	12,698	33,470	246,681
Value Rs.	15,34,41,259	10,47,24,884	5,90,44,292	4,07,18,023	2,63,08,043	2,04,67,091	1,85,43,143	9,33,104	14,66,538	42,10,102	3,110,53,365
Kathiawar ports	Tons	...	93,311	63,788	73,390	110,963	87,889	14,796	1,629	27,223	85,674
Value	Rs	1,06,19,578	76,51,159	75,10,678	96,57,949	77,23,384	12,36,148	74,262	28,16,281	1,08,29,405	...

* Government's Estimate of Revenue from Import Duty on Sugar and Excise Duty (Combined) for 1940-41 Rs. 5,25,00,000
† Imports into Burma excluded from 1937-38.

Figure of net imports not available after January 1940, as statistics discontinued.

TABLE NO. 19.

Excise Duty and Import Duty on Sugar, Sugar candy,† and Molasses in India.

On Sugar per cwt.	Protective Import duty per cwt.	Additional Revenue Duty	Total Import Duty per cwt.
From 1st April, 1932 to 31st March, 1934	Rs. 7-4-0	Revenue surcharge @ 25% of protective duty=Rs. 1 13-0	Rs. 9-1-0
From 1st April, 1934 to 27th February, 1937	7-12-0 (0-8-0 being additional margin)	Equivalent excise duty Rs. 1-5-0	9-1-0
(Rs. 1-5-0 Excise Duty on domestic production of factory sugar)			
From 28th February, 1937	7-4-0	Equivalent excise duty Rs. 2-0-0	9-4-0
(Rs. 2-0-0 Excise duty on domestic production of factory sugar)			
From 1st April 1939	6-12-0	Equivalent excise duty Rs. 2-0-0	8-12-0
(Rs. 2-0-0 Excise Duty on domestic production of factory sugar)			
From 1st March, 1940			
(Rs. 3-0-0 Excise Duty on domestic production of factory sugar)	6-12-0	Equivalent excise duty Rs. 3-0-0	9-12-0*

†From 20th February, 1934, a revenue duty of Rs. 10-8 per cwt. was imposed on *sugar candy* in place of Rs. 9-1-0 per cwt. The rate of import duty on *molasses* is 31¼ per cent. *ad valorem* since April, 1932.

*The Import Duty of Rs. 9-12-0 per cwt. works out at Rs. 7-2-9 per md. and Rs. 3-0-0 excise duty per cwt. works out at Rs. 2-3-3 per md. This import duty has been continued till 31st March, 1942.

TABLE NO. 20.

Yield of Revenue from Import Duty on Sugar in India
(Burma excluded from 1937-38)*

Year (April-March)	Yield of Revenue Rs.
1931-32	7,97,63,000
1932-33	6,84,79,000
1933-34	4,72,04,000
1934-35	3,81,35,040
1935-36	3,24,16,000
1936-37	50,52,000
1937-38	25,33,000
1938-39	45,22,000
1939-40	3,96,08,000
1940-41 (April to December, 1941)	17,03,000

*Includes Sugar candy up to December, 1933.

For value of foreign sugar imported and rate of import duty on sugar from 1920-21 to 1940-41, *vide* Table No. 42 in this section.

TABLE NO. 21

Excise Duty on Factory Sugar produced in British India and Yield of Revenue from it during 1934-35, 1935-36, 1936-37, 1937-38, 1938-39 and 1939-40 (Burma excluded from 1935-36), Fiscal years (April-march)*

Class of Sugar	Amount of duty per cwt.	Yield of Revenue from Excise Duty.					Budget Estimate from Excise Duty on Factory Sugar and Khandasari Sugar (excluding Burma) for 1940-41
		1934-35	1935-36 (Burma Excluded)	1936-37	1937-38	1938-39	1939-40
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Khandasari Sugar	0-10-0 (up to 27th Feb. 1937) 1-0-0 (up to 28th Feb. 1938, and 0-8-0 from 1st March, 1938.	77,000	60,000	47,000	51,000	59,000	1,35,000†
All other Sugar	Rs. 1-5-0 (up to 27th Feb. 1937) Rs. 2-0-0 up to 28th Feb. 1940 & Rs. 3-0-0 after 1st March, 1940.	96,45,000	1,58,24,000	2,52,02,000	3,30,97,000	4,22,44,000	2,47,19,000
							Rs. 5,25,00,000
							17,40,000 (Ten months)
Total		97,22,000	1,58,84,400	2,52,49,000	3,31,48,000	4,23,03,000	2,48,54,000

*Excise Duty on Khandasari Sugar was levied at the rate of Re. 1 per cwt. from 28 February, 1937, and at Rs. 2 per cwt. on other sugar produced in factories, from 28th February, 1937. There is no excise duty on palmyra sugar, the production of which was estimated at about 11,500 tons in 1936-37, and about 6,000 tons in 1937-38.

†Excise Duty on Khandasari Sugar reduced to 0-8-0 per cwt. from 28th February, 1939, but made applicable to all Khandasari Sugar, manufactured with the aid of power. Definition of Factory in the Sugar (Excise) Duty Act, 1934, modified, for making a larger quantity of Khandasari Sugar pay excise duty. Government's estimate was that 60,000 tons of Khandasari Sugar will pay excise duty in 1939-40, but only 13,000 tons paid the duty and in 1939-40, for 10 months, 17,400 tons paid duty.

TABLE NO. 22

Average price of Indian and Imported Sugar in India, per maund, of 82-2/7 lbs.

	1934	1935	1936	1937	1938	1939	1940
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Indian 1st quality, Special (Cawnpore Market average quotation (Factory Delivery Basis)	9-6-0	9-0-0	8-4-0	7-0-0	8-8-0	(up to Oct.) 10-12-0	(Oct.) 11-0-0
Imported Sugar (Calcutta market average quotation)	9-13-0	9-13-0	9-12-0	9-10-0	10-8-0	11-0-0	11-4-0

TABLE NO. 23
Average price of gur per maund*

Gur market	Rs. A. P. 1935	Rs. A. P. 1936	Rs. A. P. 1937	Rs. A. P. 1938 (10 months)
Lyalipur	4 15 0	3 13 0	3 0 0	3 9 10
Meerut	4 5 7	3 6 5	2 10 11	3 7 4
Siswa Bazar	3 7 6	2 10 6	1 7 2	2 3 6
Bhagalpur	4 4 0	2 15 10	2 1 1	3 10 5
Calcutta	4 8 9	3 5 0	4 0 7	5 6 6
Dacca	5 3 4	4 0 11	4 9 9	7 1 8
Madras	5 10 11	3 14 2	3 1 8	4 13 2
Ahmednagar	6 1 2	3 14 1	3 4 2	5 12 5

*Vide Reply in the Legislative Assembly dated 7th March, 1939.

TABLE NO. 24
Factory Sugar Excise Returns of British India* month by month,
during 1937-38, 1938-39, 1939-40 and 1940-41.

Month	1937-38		1938-39		1939-40		1940-41	
	Amount of Excise Duty collected in 000's Rs.	Calculated issues of Sugar in Tons	Amount of Excise Duty collected in 000's Rs.	Calculated issues of Sugar in Tons	Amount of Excise Duty collected in 000's Rs.	Calculated issues of Sugar in Tons	Amount of Excise Duty collected in 000's Rs.	Calculated issues of Sugar in Tons
	Rs.	Tons	Rs.	Tons	Rs.	Tons	Rs.	Tons
April	37,79	94,500	35,54	88,850	13,77	34,425	11,75	19,583
May	32,36	80,875	46,71	111,777	16,46	41,150	19,99	33,316
June	29,57	73,925	39,06	97,650	20,76	51,900	22,82	38,033
July	27,15	67,875	35,20	88,000	8,67	21,600	19,35	32,250
August	21,26	53,150	25,46	63,650	6,82	17,050	13,41	22,350
September	23,92	59,800	31,93	79,825	9,01	22,775	14,41	24,016
October	24,00	60,000	41,71	104,275	51,87	39,800	67,43	62,383
November	23,13	57,825	27,42	63,550	12,63	31,575	59,78	99,633
December	22,54	56,350	16,52	41,300	7,93	19,825	29,15	48,583
January	28,10	72,500	20,58	51,450	22,16	55,400	31,08	51,800
February	22,86	57,150	29,44	73,850	31,78	79,450		
March	36,29	95,725	72,77	181,925	81,32	203,400		
Total	33,097	830,000	42,244	105,1102	24,718	618,350		

*One Ton ordinarily refers to 10 bags.

**Duty increased from Re. 1-5-0 per cwt to Rs. 2-0-0 per cwt from 28th February, 1937, and to Rs. 3-0-0 per cwt. from 1st March, 1940.

N. B.—As excise duty on sugar issued out of factories in a particular month is charged in the following month, calculated issue of sugar always relates to the month previous to that in which excise duty is collected. Thus, 34,425 tons of sugar shown against April, 1939, were actually issued out of factories in March, 1939.

*Burma excluded from 1937-38.

TABLE NO. 25

Approximate Official Estimate of total Carry-over of Stocks of Sugar in India at the beginning of November, since 1931.*

Year					Tons
1931	32,000
1932	19,000
1933	9,000
1934	30,000
1935	23,000
1936	159,000
1937	211,000
1938	102,000
1939	105,000
1940 (Our Est.)	375,000

*Vide Reply in the Legislative Assembly, dated 21st February, 1939.

TABLE NO. 26

Total Tonnage and Earnings from Sugar, refined and unrefined, for All Class I Rys., in India.

Year (Apl./March)	Over East Indian Ry. in thousand Rs. & tons		Over B. & N. W. Ry. in thousand Rs. & tons		All Class I Rys. in thousand Rs. & tons	
	Rs.	Tonnage	Rs.	Tonnage	Rs.	Tonnage
1932-33	15.61	160	19.08	183	1,29.47	1,067
1933-34	27.73	275	33.01	335	1,66.73	1,461
1934-35	26.69	277	28.31	287	1,56.82	1,414
1935-36	23.87	280	28.48	326	1,58.30	1,524
1936-37	32.18	402	40.16	484	2,30.10	2,205
1937-38	28.14	362	43.14	497	2,11.31	2,047
1938-39	28.45	442	41.19	493	2 15.91	2,236
1939-40	15.91	237

TABLE NO. 27

Total Tonnage and Earnings from Railway Freight on Sugar-cane on East Indian Ry. & B. & N. W. Ry.

Year (Apl./March)	East Indian Railway		B. & N. W. Ry.	
	Earnings	Tonnage of sugarcane carried	Earnings	Tonnage of sugarcane carried
	Rs.	Tons	Rs.	Tons
1933-34	4,07,900	3,49,200	11,98,800	1,149,900
1934-35	5,32,100	6,36,500	18,15,700	1,664,600
1935-36	8,21,400	8,66,100	15,50,800	1,712,200
1936-37	7,48,500	8,60,400	13,08,900	1,437,600
1937-38	7,22,200	9,27,500	13,20,000	1,598,000
1938-39	5,25,600	6,38,800	9,92,000	938,000
1939-40	8,36,200	9,90,600	—	—

TABLE NO. 28

Railway freight O. R. on Sugar per maund from certain stations on the E. I. and B. & N. W. Railways to various Ports and Towns.

From Stations	To Bombay	To Karachi	To Madras	To Vizagapatam Town	To Cochin	To Howrah	To Rangoon	To Ahmedabad	To Tuticorin	To Akyab
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Dehri-on-Sone	1 0 0	1 1 3	0 14 5	0 14 4	0 14 5	0 8 3	*1 1 3	1 1 3	0 14 5	*1 5 0
Bihta	1 0 0	1 1 3	0 14 5	0 14 5	0 14 5	0 8 3	*1 1 3	1 1 3	0 14 7	*1 5 0
Guraru	1 0 0	1 1 3	0 14 5	0 14 5	0 14 5	0 7 11	*1 0 11	1 1 3	0 14 5	*1 4 8
Rosa	1 0 0	1 0 0	1 2 0	1 0 0
Lucknow	1 0 0	1 0 0	1 2 0	1 0 0
Motihari	1 1 6	1 2 0	1 0 0	1 0 0	1 0 0	0 11 6	*1 4 6	1 2 0	1 2 2	*1 8 3
Basti	1 0 3	1 0 6	1 1 0	1 1 0	1 1 0	0 15 6	*1 8 6	1 0 6	1 3 2	*1 12 3
Sardarnagar	1 0 0	1 1 9	1 0 6	1 0 6	1 0 6	0 13 8	*1 6 8	1 1 0	1 2 8	*1 10 4

N.B.—Traffic at these rates is subject to the increase of 0.20 per Rupee on the total freight charge, which is in force on and from the 1st March 1940. So far as the traffic to Rangoon and Akyab is concerned, the increase in freight charge is leviable on Railway's proportion only.

*Railway's proportion is the same as Howrah rate.

TABLE NO. 29

Approximate Railway freight on Sugar-cane in 1938-39.

Railway	Kind of Wagon	Average capacity	Distance	Rate per Wagon
A. B. Ry.	4 wheeler	160 maunds	55 miles	Rs. 8-14-6
E. B. Ry.	4 wheeler	160 maunds	117 miles	Rs. 27-0-0
E. B. & A. B. Ry. combined	4 wheeler	160 maunds	54 miles	Rs. 17-8-0
B. & N. W. Ry.	4 wheeler	270 maunds	55-60 miles	Rs. 9-0-0
E. I. Ry.	4 wheeler	480 maunds	35 miles	Rs. 10-0-0
			up to 50 miles	Rs. 14-0-0
			up to 100 miles	Rs. 25-0-0

TABLE NO. 30

Export of Sugar from India by sea and by land† in Tons.

Years (Nov.-Actr.)	By Sea		By Land	
	Quantity Tons	Value Rs.	Quantity Tons	Value*
1930-31	493		40,126	
1931-32	382	67,831	26,535	
1932-33	356	53,254	31,472	
1933-34	434	73,273	30,077	
1934-35	449	67,524	27,053	
1936-37	10,640	19,32,954	35,062	
1937-38**	8,668	18,13,541	31,097	
1938-39	2,092	5,09,565	31,290	
1939-40 (3 months)	61		20,707 (10 months)	

*Value not recorded by the Dept. of Commercial Intelligence and Statistics.

**From April 1937, figures of exports to Burma are included.

†Export of Sugar by Sea to countries other than Burma is prohibited up to May, 1942, by the International Sugar Agreement.

TABLE NO. 31

*Expenditure on Sugar Research by the Imperial Council of Agricultural Research.**

Years	Amount Spent or proposed to be spent Rs.	Directions in which spent.
1935-36	4,79,088	Production and testing of new varieties of sugarcane.
1936-37	3,88,627	Devising and testing systems of cultivation and manuring.
1937-38	3,46,820	Study and combating of insect and fungus pests.
1938-39	3,24,928	Research into use of molasses as manure and cattle food.
1939-40	3,56,790	Etc., Etc.
1940-41	4,08,000	

TABLE NO. 32

*Estimated Percentage of Gate-cane to the Total Quantity of Cane (in Gate-cane and Rail borne cane) Crushed by Factories in the Various Provinces.**

Province	1934-35 %	1935-36 %	1936-37 %	1937-38 %	1938-39* %	1939-40** %
North Bihar	51	51	61	56	57	55
South Bihar	34	43	37	34	36	41
Total Bihar	48	50	58	53	53	53
United Provinces	65	66	68	72	66	62
Bengal	22	26	45	55	54	33
Punjab	—	51	61	69	57	47
Bombay	100	100	100	100	100	99
Madras	—	35	67	71	72	75

*Compiled by the Indian Sugar Syndicate Ltd. in September 1939.

**Compiled by us from the returns made by factories in 1939-40.

TABLE NO. 33

Production, Consumption and per capita consumption of Sugar by Provinces (November-October)

Name of Province.	1935-36 (Nov.-Oct.)			1936-37 (Nov.-Oct.)			1937-38 (Nov.-Oct.)		
	Production in 000's tons.	Consumption in 000's tons.	Per capita Consumption in lbs.	Production in 000's tons.	Consumption in 000's tons.	Per capita Consumption in lbs.	Production in 000's tons.	Consumption in 000's tons.	Per capita Consumption in lbs.
Bengal	31	158	6.7	29	174	7.3	26	190	7.9
Bombay	36	212	15.5	55	283	16.2	61	230	16.3
Madras	34	72	2.8	34	100	3.9	34	100	3.9
Bihar and Orissa	258	62	3.1	335	70	3.5	231	64	3.3
United Provinces	647	131	5.6	729	125	5.4	655	150	6.4
Punjab (N.W.F.P.) Delhi	89	233	14.6	33	265	16.5	30	228	14.9
C. P. and Berar	40	5.1	...	43	4.9	...	44	5.0
Assam	14	3.5	...	17	3.6	...	18	4.0
Sind and British Balu- chistan	22	9.5	...	25	10.2	...	30	12.6
Rajputana	53	9.5	...	58	10.6	...	43	9.9
Central India	28	6.1	...	35	6.4	...	23	4.5
Nizam's Territory	18	2.6	...	19	2.7	...	21	3.0
Kashmir	2	1.2	...	3	1.7	...	2	1.2
Mysore	8	2.6	...	10	2.9	...	4	1.3
Burma	21	3.1
ALL-INDIA	1,074	6.5	...	1,167	7.3	...	1,159	7.2

*Vide Review of the Sugar Trade of India, 1938-39 in the *Indian Trade Journal*, dated 30th May, 1940 and previous issues.

TABLE NO. 34

*Total Production, Import, and Export of Molasses in India†
... for the last 9 years.*

Year	Production of Molasses in India in Thousand Tons				Import of Molasses into British India (Tons) Apl.-Mar.	Export of Molasses from British India (Including Palmyra and cane jaggery) (Tons) Apl.-Mar.
	From Cane factory	From Gur Refine- ries	From Khand- sari.*	Total*		
Nov.-Oct.						
1931-32	69	46	250	365	40,191	740
1932-33	130	56	275	461	31,991	819
1933-34	190	40	209	430	2,401	1,261
1934-35	234	22	150	406	415	1,153
1935-36	337	33	125	495	Nil	1,026
1936-37	406	10	100	516	Nil	24,195
1937-38	349	8	125	492	5	79,167
1938-39	242	7	100	349	2,160	52,676
1939-40	485	7	100	592	1,846	15,415
					(10 months)	(10 months)

†After 1936-37, statistics Re: Burma are excluded.

*Official Estimates.

TABLE NO. 35

Total value of Sugar Machinery Imported in British India.
(In thousands of Rupees)

Source	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	1939-40
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs. (10 Months)
United Kingdom	91,48	1,95,87	73,60	49,70	68,49	43,15	30,16	18,98
Other Countries	61,63	1,40,51	31,84	16,00	26,66	26,21	31,20	25,47
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	1,53,11	3,36,38	1,05,45	65,70	95,16	69,37	61,36	44,45

TABLE NO. 36

Calculated Net Production of Gur in India for direct consumption, from 1937-38 to 1938-39.*

Year. (November-October)	Calculated net Annual Production of Gur for direct consumption in Tons.			
1927-28 2,279,000
1928-29 1,787,000
1929-30 1,842,000
1930-31 2,241,000
1931-32 2,758,000
1932-33 3,240,000
1933-34 3,486,000
1934-35 3,701,000
1935-36 4,101,000
1936-37 4,268,000
1937-38 4,364,000
1938-39 2,131,000
1939-40 (Our Est.) 2,500,000

*Figures for net production are calculated from the figures for total yield of Gur in the "Final general Memorandum" each year allowing for the Gur equivalent to cane used for other purposes (adopting the conversion factor of 10). Vide Review of the Sugar Industry of India for 1938-39, issued as supplement to the Indian Trade Journal, dated 30th May, 1940.

TABLE NO. 37

*Increased Profit from Growth of Improved Varieties of Cane.**

	Per Canal Bigha (5½ acre.)	
	Desi Cane	Improve Cane
	Rs. A.	Rs. A.
Cost of Seed, Cultivation and Manuring	51 6	55 10
Irrigation	7 4	7 4
Rent	10 0	10 0
Total Cost Rs.	68 10	72 14
Yield, Maunds	250 0	350 0
Value of Gur, 10% Recovery at Rs. 3 per maund	75 0	150 0
Profit Rs.	6 6	32 2

* *Vide Report of Sir John Russell, on the work of the Imperial Council, 1937 pp. 102.*

TABLE NO. 38

Cane factory Production of Sugar in U. P., Bihar, and All India (in Tons).

Season	U. P.	Bihar	All-India	Total quantity of cane crushed all factories in tons.
(Cane-Factories Production Figures only)				
1931-32	66,312	75,091	1,58,581	17,83,000
1932-33	1,40,344	1,28,610	2,90,177	33,50,000
1933-34	2,73,774	1,39,957	4,53,965	51,57,000
1934-35	3,15,600	1,84,038	5,78,115	66,72,000
1935-36	5,30,000	2,50,200	9,32,100	98,01,000
1936-37	6,08,600	3,29,300	11,11,400	1,10,87,000
1937-38	5,31,300	2,25,300	9,30,700	99,16,400
1938-39	3,20,300	61,600	6,50,800	70,04,800
1939-40	6,59,500	3,22,100	12,41,700	1,31,31,700
1940-41 (Our Est.)	—	—	9,75,000	1,00,00,000

TABLE NO. 39

Syndicate's Grading & Price Chart per Maund of Sugar for 1940-41.

	27 Rs.	26 Rs.	25 Rs.	24 Rs.	23 Rs.	22 Rs.	21 Rs.	20 Rs.
A	9/8/9	9/7/9	9/5/9	9/4/9	9/3/3	9/0/3	8/14/3	.
B	9/7/3	9/6/3	9/4/3	9/4/3	9/1/9	8/14/9	8/12/9	..
C	9/5/3	9/4/3	9/2/3	9/1/3	8/15/9	8/12/9	8/10/9	...
D	9/4/3	9/3/3	9/1/3	9/0/3	8/14/9	8/11/9	8/8/9	8/6/9
E	9/3/3	9/2/3	9/0/3	8/15/3	8/13/3	8/9/9	8/7/9	8/5/9
F	9/2/3	9/1/3	8/15/3	8/14/3	8/12/3	8/8/9	8/6/9	8/4/9
G	9/1/3	9/0/3	8/14/3	8/13/3	8/01/9	8/7/9	8/5/9	8/3/9
Crushed			13	...	9/3/3			
			12	...	9/1/3			
			11	...	8/15/3			
			10	...	8/14/3			
			9A					
			9					

TABLE NO. 40

Recovery of Sugar from Canc during the Eight Seasons 1932-33 to 1939-40

Provinces	Recovery of Sugar per cent Cane:							
	1933-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	1939-40
United Provinces	8.55	9.08	8.56	9.60	9.65	9.18	9.14	9.37
Bihar	...	8.60	8.32	8.79	8.93	9.20	9.58	9.00
Other Provinces	8.90	8.75	8.77	9.00	9.60	9.77	9.91	9.88
All-India	...	8.66	8.80	8.66	9.29	9.50	9.38	9.29

TABLE NO. 41

Production of Sugar directly from Cane in Modern Factories in India, 1929-30 to 1939-40, and Recovery Percentage for Java.

Season.	Number of Factories producing Sugar direct from Cane.	Cane crushed	Sugar produced	Percentage Recovery for India	Percentage Recovery for Java.
		Tons.	Tons.		
1929-30	27	989,776	49,768	9.07	11.82
1930-31	29	1,317,248	119,859	9.09	11.36
1931-32	32	1,783,499	158,581	8.89	10.40
1932-33	57	3,350,231	290,177	8.66	11.16
1933-34	112	5,157,373	453,965	8.80	12.64
1934-35	130	6,572,030	578,115	8.66	12.35
1935-36	137	9,801,743	932,100	9.29	13.21
1936-37	137	11,687,200	1,111,400	9.50	11.62
1937-38	136	9,916,400	930,700	9.38	11.40
1938-39	139	7,001,800	650,800	9.29	11.61
1939-40	145	13,131,700	1,241,700	9.45	...
1940-41(Our Est.)	148	10,000,000	975,000	9.54	..

TABLE NO. 42

Value of imports of sugar, revenue from imports, and rate of import duty on sugar from 1920-21 to 1940-41.*

Year April- March	Value of foreign sugar (net) Imported in British India in Lakhs of Rupees	Revenue from Import duty on Sugar in Lakhs of Rupees	Rate of Import Duty
1920-21	1,850	185	10 p.c. <i>ad valorem</i>
1921-22	2,750	412	15 p.c. <i>ad valorem</i>
1922-23	1,549	487	25 p.c. <i>ad valorem</i>
1923-24	1,545	486	" "
1924-25	2,090	578	" "
1925-26	1,520	659	Rs. 4-8-0 per cwt.
1926-27	1,836	744	" "
1927-28	1,450	653	" "
1928-29	1,586	782	" "
1929-30	1,534	846	" "
1930-31	1,047	1,081	Rs. 6-0-0 per cwt.
1931-32	590	798	Rs. 9-1-0 per cwt. Rs. 9-1-0 per cwt. (Rs. 7-4-0 being pro- tective, 1-13-0 being revenue surcharge from 1st April, 1932.)
1932-33	407	695	" "
1933-34	263	472	Rs. "9-1-0" per cwt. (Rs. 7-12-0 being Pro- tective, 1-5-0 being equi- valent excise duty from 1st April 1934).
1934-35	205	381	" "
1935-36	185	324	Rs. 9-4-0 per cwt.
1936-37*	9	51	Rs. 7-4-0 being pro- tective and Rs. 2-0-0 being equivalent ex- cise duty from 28th February, 1937)
1937-38	15	25	" "
1938-39	42	45	Rs. 8-12-0 per cwt.
1939-40	276 (For 10 moths—April to January)	3,96	Rs. 6-12-0 being pro- tective, Rs. 2-0-0 being equivalent excise duty. (With effect from 1st April, 1939)
1940-41	...	17 (April to January, 1941	Rs. 9-12-0 per cwt. Rs. 6-12-0 being pro- tective duty, and Rs. 3-0-0 being equivalent excise duty. (With effect from 1st March, 1940)

▲Burma excluded from 1937-38.

TABLE NO. 43

Production of sugar in the Provinces from Cane, Gur and Khandsari (i.e. total production of sugar) from 1931-32 to 1939-40 (Burma has been excluded since 1936-37).

Provinces.	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	1939-40
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons (Our Est.) 700,000
United Provinces	283,300	384,600	454,000	446,500	645,600	692,800	628,400	394,200	325,000
Bihar	88,500	144,500	150,000	191,600	257,900	335,000	231,700	166,600	15,000
Punjab	35,900	41,300	35,900	27,700	29,000	26,100	23,100	37,100	..
Madras	28,600	35,300	30,000	31,000	33,700	33,700	34,600	57,300	..
Bombay	19,800	21,100	23,200	28,300	35,900	43,200	46,900	14,900	..
Bengal	12,500	13,800	15,900	18,900	31,200	29,400	26,000	81,400	..
Other Provinces & States	2,000	2,600	8,800	27,600	71,700	76,800	82,200	766,600	..
Total for India	470,600	643,200	718,900	771,600	1,105,000	1,237,000	1,072,000

* Vide Trade Journal, 30th May, 1940.

TABLE NO. 44

Java Sugar Statistics from 1935-36 to 1940-41.

(In long tons)

Crop year	Initial Stock on 1st April	Production	Exports	Local	Final Stock on 31st March
				Consump-	
1935-36	1,585,397	505,528	863,356	285,013	942,556
1936-37	942,556	583,029	975,003	309,449	241,133
1937-38	241,133	1,392,151	1,017,276	306,522	309,486
1938-39	309,486	1,376,824	1,163,809	315,922	206,579
1939-40	206,579	1,550,462	1,214,125	311,500	238,176
1940-41	238,176				

* *Vide Lamborn Weekly Report, issue of January 14, 1941.*

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The Indian Sugar Industry— (1940 Annual)

PART I.

*(A Review of the Sugar Industry in India during the 1939-40 Season
and comments on the 1940-41 Season).*

Introductory

THE Indian Sugar Industry, which has had a very chequered career during the last 8 years, passed through an unprecedented severe crisis during the 1939-40 season. The period, under review, was the worst period of the industry since the commencement of protection in 1932, and during the year a very large number of factories in the United Provinces and Bihar*, the two major sugar producing provinces of the country worked practically without any profits due to a variety of reasons, the chief being the fixation of abnormally high minimum prices of cane, and the reduction of price of sugar later in the season owing to an overproduction of sugar, and the accumulation of very large stocks of sugar, the *largest* in the history of the sugar industry so far.

At the commencement of the 1939-40 crushing season, there was a general expectation that there would be a short production of sugar but within three months of the commencement of the cane crushing season in the month of November, 1939, it became apparent that such an expectation was entirely erroneous, and that a substantially larger quantity of sugar would be available and would have to be carried over to the next season. The position of the sugar industry deteriorated further first by the unexpected increase of fifty per cent. in the excise

*Sugar Factories outside the U. P. and Bihar, i.e., those in Bombay, Madras, Bengal and also in Indian States made handsome profits during the 1939-40 season.

duty on sugar from the 1st March, 1940, and later by the withdrawal of the recognition of the Indian Sugar Syndicate Ltd., by the Governments of U. P. and Bihar. This recognition was restored later, but after imposing certain strict conditions and control on the working of the Syndicate, through the appointment of a Sugar Commission, which was given wide powers, including those of fixing selling quotas and price of sugar.

Chief Features of the Industry in the Year 1939-40.

Amongst the prominent features of the 1939-40 season we would refer here to the following—

When the 1939-40 season began, sugar prices like those of many other commodities ruled high owing to the outbreak of the European War in September, 1939, and the shortage of Indian sugar but began to fall after January, 1940, as the possibility of overproduction in the 1939-40 season was noticed.

Initial High Minimum Prices of Cane Fixed in U. P. and Bihar in 1939-40 and Cane-cess.

The minimum cane prices fixed by the Provincial Governments of U. P. and Bihar in accordance with the revised sliding scale linking the cane prices with the average price of sugar were at a very high level, and were not acceptable to the industry which disapproved of the principle of the sliding scale generally, and particularly the sliding scale as modified by the Governments of U. P. and Bihar in 1940,* on the ground that it was inequitable to the factories owing to the large increase in manufacturing costs, supply of diseased cane with lower sucrose contents etc.

*The industry noticed with regret that even after adoption of the sliding scale, the Governments' first mistake was to base the opening prices of cane on the price ruling for imported sugar in October 1939, which, in the absence of competition, was naturally higher due to the fact that owing to the short cane crop, in the 1938-39 season in India, the sugar manufactured out of it was sold out. The protests of the industry not to start crushing unless prices of cane were brought down to an equitable level were of no avail. The Syndicate had then no alternative but to fix its basic price for sugar accordingly, in the knowledge that, even if it had been possible for it to keep sugar prices down to an unnaturally low level, this would not, under the sliding scale, have been reflected in the cane prices until a further month had elapsed.

(Vide speech of Lala Karam Chand Thapar, President, Indian Sugar Syndicate Ltd., on the 2nd April 1940, at Lucknow, and of Mr. J. Aitken, President, Indian Sugar Mills Association, on the 14th September, 1940, at Cawnpore.)

The minimum price of cane fixed at the commencement of the season, i.e. in November, 1939, by the U. P. and Bihar Governments was Rs. 0-8-9 per md. which was subsequently increased to Rs. 0-9-9 per md. in December, 1939, and to Rs. 0-10-9 per md. in the U. P. and 0-10-6 in Bihar, in January, 1940 in addition to the Provincial Cess on cane of 0-0-6 per md. which was levied from the commencement of the season.

Sugar prices further went up and a rise in sugar prices meant a further rise in cane prices and so the vicious circle went on. From January, 1940, onwards the prices were reduced and upto 10th April, 1940, the prices were fixed at 0-8-9 per maund. No minimum price was fixed for *Khandsari* manufacturers crushing cane.

Minimum Price of Cane outside U. P. and Bihar.

Except in Mysore, and in the Hospet area in Madras, minimum prices of cane were not fixed in any other part of the country.

Serious Mistake in Estimating Production of Sugar.

The total acreage under cane was about 16 per cent higher than the previous season when the cane-crop and sugar production were remarkably small but it was felt at the beginning of the season, i.e., in November, 1939, that looking to the condition and quality of the cane crop which suffered from Wilt and red-rot in various parts, the production sugar will not be very much larger than the previous year and that at the outside it would be equal to the estimated annual consumption of sugar in the country. But from January, 1940, as the season advanced it became apparent that larger quantities of cane which would normally have gone for the making of *gur* would become available for crushing in the factories due to the abnormally high prices of cane fixed by the Governments of U. P. and Bihar, and as a consequence the amount of sugar produced would exceed the expectations of the industry as also of the Government (both of whom seriously* miscalculated the probable production of the season) and that there would be a very large accumulation and carry-over of stocks of sugar at the end of the season, adding to the difficulties of storage and finance.

*When the 1939-40 season commenced, there were very little stocks due to the short production of the previous season in the market. Rates were ruling higher than the basic rates of the Syndicate, markets were keen buyers, war had introduced a bullish tendency in all commodity markets, and there was expectation of a short production during the year due to the prevalence of cane diseases and pests which made the Government to reduce cane prices for poorer quality.

(*vide* the speech of the Chairman, Indian Sugar Syndicate at Lucknow) on the 2nd April, 1940.

Large Carry-over Visible in March, 1940.

In March 1940, it became very clear that looking to the availability of large quantities of cane to the factories consequent on high prices of cane, and improvement of the crop due to late rains, the total production would be over 12 lakhs tons from the factories alone (excluding the Khandsari) and thus there would be between $3\frac{1}{2}$ to 4 lakh tons more sugar than would be consumed in by the country. The Syndicate maintained high prices of sugar till March, 1940, with the consequence of increasing stocks of high-priced sugar which the market could not absorb. The position became further serious because of the expected overproduction of sugar in the 1940/41 season due to the large sowings of cane during the year as a result of the high prices of cane, and there were serious apprehensions of grave losses to the industry, unless the Governments of U. P. and Bihar immediately reduced the price of cane appreciably.

Reduction in Cane Prices of 0-0-9 per maund due to Increased Excise.

Following the increase of Re. 1/- per cwt. in the excise duty on sugar imposed by the Central Government, from 1st March, 1940, the Governments of U. P. and Bihar made a special reeduction of 9 pies per maund in the cane prices, with effect from 3rd March, 1940. This was, in fact, a revision of the sliding scale necessitated by the addition in the excise duty which at the time the original scale was formulated in 1939 was Rs. 2/- per cwt. The industry felt that the reduction of 9 pies per maund in the price of cane was not adequate and represented accordingly to the Governments of U. P. and Bihar.

Special Reduction in Cane-prices after April, 1940.

On the 10th April, 1940, the Governments of U. P. and Bihar issued a joint *communiqué* announcing a special reduction in the prices of sugar from the 11th April, 1940, to 0-6-3 per maund up to 30th April, 1940, and 0-5-6 per maund thereafter till the end of the season. This action was taken because the Syndicate decided at its meeting*

*As a result of the critical position of the industry on account of the unexpected overproduction this year the Syndicate issued a *press communiqué* on 3rd April, 1940, deciding to reduce the basic price of sugar to be produced after the 10th April from Rs. 12-0-0 to Rs. 8-10-0. This was done in anticipation of the Governments of U. P. and Bihar acceding to the request made to them to reduce the cane prices and with a view to lighten the burden of the carry-over at the end of the season. The Syndicate felt that it would be easier to carry a stock priced at Rs. 8-10-0 instead of Rs. 12-0-0 and therefore requested the Government accordingly.

held on 2nd April, 1940, to close down the mills from the 10th April, 1940, unless cane prices were reduced to 0-5-9 per maund, due to the large accumulation of stocks of sugar, difficulties of further finance to the factories etc. The Governments issued a *communiqué* making the above announcement with a view to meet the situation created by the large cane crop which was standing in the fields awaiting crushing by the factories. The Governments in making the above referred to reductions stipulated as follows :—

“That separate account will be maintained and separate receipts granted of cane delivered to and taken by the factories in respect of all cane supplied on and after the 11th April”.

The Governments further observed : “The Syndicate had given an undertaking that in case they are able to market the sugar manufactured after the 11th of April, 1940, at rates higher than those corresponding to the above cane price in the sliding scale, the mills will pass on that extra profit calculated according to the sliding scale to the growers, that the factories will take as much cane as possible from the reserved areas as well as the areas from which they have hitherto been drawing cane, whether such cane is bonded or otherwise, and they will continue crushing till such times as the available and effective supplies of cane are exhausted and that factories will not close down prior to consultation and approval of the Cane Commissioner.”

Deferred payment scheme

“The Governments of the United Provinces and Bihar have decided on the measures, described above, primarily with a view to meeting the special case of surplus cane supplies which could not be converted into *gur* or otherwise profitably be disposed of. The scheme of payment for cane which is being adopted for the next few weeks is in accordance with the deferred payment scheme which is well-known in certain parts of India and does not involve a departure from the sliding scale.”

Cane Cess of 6 pies not Levied after April, 1940.

While announcing the reduction in cane price on the 10th April, 1940, the Governments of U. P. and Bihar also decided to forego the cess of 6 pies per maund levied on the cane crushed in factories with a view to ease the situation. The total realisation from the cane-cess amounted to Rs. 40 lakhs in U. P. and Rs. 17¼ lakhs in Bihar in 1939-40.

For ready reference, the joint *communiqué* of the U. P. and Bihar Governments dated 10th April, 1940, is reproduced at the end of "Sugar Industry at a glance."

Simla Sugar Conferences—June, 1940.

A Conference of the representatives of the Sugar Industry and the Governments of the sugar-producing Provinces was held at Simla on June 14th and 15th, 1940, under the Chairmanship of the Hon'ble Sir Ramaswamy Mudaliar, Commerce Member, of the Government of India, in response to the suggestions made in the Council of State during the Budget sessions, that it would be advisable for the Central Government to get together all the interests concerned, find out the difficulties of the industry and devise measures for getting over the same. Immediately, after the conclusion of this Conference and the meeting of the Sugar Committee of the Imperial Council of Agricultural Research held at Simla on June 17, 18 and 19th, 1940, under the Chairmanship of Mr. P. M. Khurshid, Vice-Chairman of the Council, the Governments of U.P. and Bihar issued a press *Communique* on the 21st of June rescinding Rule 11 (2) (a) of the Sugar Factories Control Rules under which all Sugar Mills in U. P. and Bihar were compelled to become members of the Indian Sugar Syndicate, prior to the grant of a crushing license.

Withdrawal of Recognition from the Syndicate.

The reasons of the Governments of U. P. and Bihar in withdrawing recognition from the Indian Sugar Syndicate were given in a Press note. For ready reference, we are giving the Press note issued by the Governments, on 21st June, 1940, at the end of "Sugar Industry at a glance."

Immediately after the withdrawal of the Government recognition, the Indian Sugar Syndicate decided to continue running on a voluntary basis and issued a press note to that effect, in which it also expressed the hope that the Governments of U. P. and Bihar would reconsider their decision in the matter and restore recognition to the Syndicate, in order to inspire confidence in the market.

Recognition Restored to the Syndicate on Certain Conditions.

A deputation of the Syndicate also waited on their Excellencies the Governors of U. P., and of Bihar at Allahabad and Ranchi on July 28th and August 2nd, 1940, respectively, and explained how conditions in the sugar market were fast heading towards a collapse and

how at this stage prompt action by Government was necessary, if further deterioration was to be stopped. A *communiqué* announcing the intentions of the Governments of U. P. and Bihar to cancel their notification of June 21st, 1940, withdrawing Government's recognition of the Syndicate was jointly issued by the two Governments on August 3rd, 1940. A Sugar Commission was also set up. For ready reference, we have given the full text of the *communiqué* the end of "Sugar Industry at a Glance."

Syndicate Blames Government for Higher Prices of Sugar.

The Indian Sugar Syndicate accepted the main principles contained in the Government communiqué of August 3rd, 1940, restoring recognition to the Syndicate and decided to recast their Articles of Association. The Syndicate pointed out to the Government that it alone was not responsible for the high prices of sugar, and put forward cogent arguments to show that the blame was in no small measure due to the policy adopted by the U. P. and Bihar Governments in not modifying the sliding scale of cane prices, in not making suitable allowance for increased manufacturing costs consequent on war conditions and for damaged cane in the affected areas. According to the Syndicate, Governmental insistence on the old sliding scale, and a strict application thereof were the primary causes of high sugar prices during the year 1939-40.

Increase in Excise Duty and Import Duty by the Central Government in the Middle of the Season.

An increase in the excise duty on factory sugar from its high level of Rs. 2½ per cwt. to Rs. 3 per cwt. was effected by the Government of India on the 1st March, 1940; this increase was made in the *middle of the season*, inspite of the expressed desire of the Governments of U. P. and Bihar that no changes in sugar duties should be made in the middle of the season, in view of their undesirable repercussions.*

*The Indian Sugar Syndicate also adopted the following resolution suggested by Mr. M. P. Gandhi, one of its Directors, on the subject of changes in import and excise duty on sugar and forwarded the same to the Governments of U. P. and Bihar in February, 1940 :—

"Whereas the Sugar Industry is a seasonal industry, which produces within a period of four or five months the quantity of sugar required for the country's consumption during the periods of 12 months, and

Whereas United Provinces and Bihar, which produce about 80 per cent. of the total sugar manufactured in the country, fix the minimum price of cane to be brought by the factories, and

This sudden increase in the duty with effect from 1st March, 1940, affected the industry very adversely as it was unable to pass it on either to the consumers due to the high price of sugar already prevailing, or to the cultivators due to the fixed minimum price of cane.

The total import duty on sugar was also correspondingly raised from 1st March, 1940.

Sugar Produced on or Before 29th February Exempted from the Increased Excise Duty.

The industry represented to the Government the inadvisability of making any increase in the excise duty and at the same time pointed out the desirability of exempting sugar which had been produced before 29th February, but had not been bagged and removed to the godowns, from the operation of the increased excise duty. The Government of India accepted an amendment* to their original proposals in the above manner and exempted sugar produced on or before 29th February, 1940, from the additional excise duty of Rs. 1-0-0 per cwt. Even this small relief, estimated to save about Rs. 70 lakhs to the industry, was greatly appreciated by the industry.*

High Price of Sugar till July, 1940.

The price of sugar ruled high throughout the season much to the distress of consumers. The price of sugar-cane was also fixed at a very high level. There were wide fluctuations in prices of sugar particularly, after April, 1940. Finding that sugar sales were not

*Whereas the effects of any changes in the import duty on sugar or in the excise duty on sugar made during the month of March or April, which fall in the middle of the season, are bound to be serious, either on the manufacturers or on the cane cultivators,

The Sugar Control Board recommends to the Governments of United Provinces and Bihar that they should represent to the Government of India the necessity of making any changes in the import duty on sugar or in the excise duty on sugar with effect from the month of November, that is, at the beginning of the cane crushing season, and not from the month of March or April, as has been done hitherto, live a view to avoiding undesirable effects either on the producers of the cane or the manufacturers of sugar or the merchants dealing in sugar."

(Also *vide* our 1939 Sugar Industry Annual—page 160).

*As its meeting held on 2nd April, 1940, the Indian Sugar Syndicate Ltd. passed the following resolution :—

"The Syndicate assembled at its General Meeting while feeling grateful to the Government of India for the relief given in respect of the excise duty on sugar produced upto 29th February, 1940, lodges its protest against the levy of additional excise duty on sugar which is already suffering from heavy burdens and requests the Government to remove it."

effected rapidly, the Indian Sugar Syndicate which controls the sale of about 80 per cent. of the total sugar produced in the country took a bold step of at once reducing the price of sugar manufactured by factories in the U. P. and Bihar by Rs. 2-8-0 per maund with a view to reduce the stocks in the factories and to increase consumption in the country. This step was widely criticised. A further reduction of Rs. 0-14-0 per maund was made by the Syndicate in August, 1940, when the factory received an excise payment post-ponement of Rs. 1-0-0 per maund from the U. P. and Bihar Governments, referred to elsewhere.

Divergence of Views Between the Syndicate and the Governments.

A great divergence of views was noticed between the Indian Sugar Syndicate and the Governments of U. P. and Bihar during the whole year in regard to sugar prices, the method of the operation of the Syndicate, the question of releases of quota of sugar for sale by the Sugar Syndicate at various times, when some markets were starved of sugar while others were fully supplied, the question of reduction of basic prices, the fixation of sale prices, the fixation and adjustment of the sliding scale of cane and sugar prices, the allocation of blame for prevailing high prices of sugar, the question of adequate reduction in the price of cane due to diseases etc.

Method of computing Sugar prices altered in December, 1939.

The U. P. and Bihar Governments also made certain alterations in the method of calculating sugar prices for the purpose of fixing the minimum price of cane during the next fortnight and announced their decision on the 8th December 1939 to accept the average of all *available market quotations* of 1st Grade sugar (instead of 10 highest price quotations at Cawnpore) for calculating the price of sugar according to the sliding scale. In order that there may be no difference in the cane prices between the Governments of U. P. and Bihar a final common price was arrived at by the Governments of U. P. and Bihar by the method of adjustments accepted by the two governments on the recommendations of the Sugar Control Board.

In this connection, we would invite a reference to page 101 of our 1939 Sugar Industry Annual.

As a result of the representations made by the industry about the sliding scale being unduly partial to the cane growers and detrimental to the interests of the industry, the above alterations were made in the method of calculation, and the Governments further decided to

make an allowance of 0-4-6 per md.* of sugar on account of the rise in the price of raw materials consequent on the outbreak of the European war, and this was subtracted from the average price of sugar.

A deduction of 0-0-9 per maund of cane was allowed when the excise duty was increased to Rs. 3-0-0 per cwt. This was allowed after 3rd March, 1940. The Schedule is given in the "Sugar Industry at a glance".

Extent of Deductions in Cane Prices Allowed in 1939-40.

The U. P. and Bihar Governments also announced on the 8th December, 1939, their willingness to grant deductions from the minimum price of cane in particular areas on account of damage to cane from diseases and pests in accordance with the extent of the damage.

The Bihar Government also amended Rule 31 of the Sugar Control Rules in December, 1939, on the lines of the U. P. Rules, whereby they were authorised to make deductions in price of cane in any tract declared by the Government as a tract (a) in which the cane is definitely below the average standard on account of natural causes or (b) in which a specified inferior variety of cane is ordinarily or preponderatingly grown, or (c) in which owing to inaccessibility or other special causes, the circumstances are such that a deduction from the minimum price would be in the interest of the growers.

The maximum deduction made in respect of the price of cane due to its being damaged was 0-1-6 per maund in two divisions in Bihar, viz. Bettiah and Gopalgunge in the month of January and February, 1940, and about 6 pies per maund from 17th December, 1939, at purchasing centres in various districts where canes were damaged.

The U. P. Government made a general reduction of 0-0-6 per maund for all cane purchased in some affected districts, and for "Desi" cane in Basti, Gonda districts and Gorakhpur districts, and of 9 pies per maund in some districts.

The U. P. Government issued a press note on February 10, 1940, in connection with the cost of transport by rail of cane from distant areas as they felt that there was not much likelihood of cane being taken at the minimum price by sugar factories due to the cost of transport by rail being prohibitive on account of the distances between such

The Syndicate asked for a larger allowance of 0-12-0 per maund.

factories and the areas of surplus cane. They also stated that owing to the high price of sugar-cane purchased by sugar factories as compared to the price of cane for *gur*, the growers themselves were anxious to sell their cane to factories. In the interest, therefore, of the growers, to enable them to dispose of their surplus cane to the best advantage, the U. P. Government allowed, with effect from February 13, 1940, further deductions from the minimum price for cane purchased at railway stations in the few districts* stated in the communique, for transport by rail to factories. When the railway station at which the cane is purchased is more than 80 miles from the purchasing factory, the deduction was 1 anna per maund, and when more than 110 miles, 0-1-3 per maund, when more than 140 miles 0-1-6 per maund, and when more than 170 miles 0-1-9 per maund.

This action was taken in response to the suggestion made by the Indian Sugar Syndicate for a graded deduction in the price of cane according to the distances from where it was bought.

Import of Sugar During 1939-40 Season.

The import of sugar during the year was negligible as compared with the previous season when the production of sugar in the country was abnormally small.** Since January, 1940, the imports of sugar were on the decline and in response to the representations of the industry drawing their attention to apprehended large imports, the Government of India decided to restrict imports of Java Sugar to 35,000 tons during the year 1940-41.

Representation for Increasing Import Duty.

During the year 1940 the Syndicate approached the Government for an increase in the tariff duty on sugar with a view to prevent Java Sugar coming into Indian ports, and they also decided to sell sugar at a

*These districts of surplus cane which was not required by neighbouring factories were:—Ballia, Ghazipur, Azamgarh, Benares, Mirzapur and Jaunpur.

**Monthly imports of Sugar since November, 1939, were as follows—

<i>Month</i>				<i>In thousands of tons.</i>
November, 1939	14.2
December "	4.5
January 1940	1.4
February "	1.5
March "	0.7
April "	5.9
May "	2.2
June "	1.1
July "	0.6

reduced price suffering a loss in the port markets with a view to keeping out Java Sugar in view of the large over production in the country. The representation to stop import of foreign sugar or to raise the tariff* wall by about Rs. 3-0-0 per maund was made in April, 1940, by the industry in order to ensure Indian sugar securing a fair price of about Rs. 12-4-0 ex-factory, for it was at this high level that Indian sugar was manufactured during the current season upto April 10, 1940, in the Provinces of U. P. and Bihar.

At its meeting held on 2nd April 1940, the Indian Sugar Syndicate Ltd. passed the following resolution:—

“The Syndicate brings to the notice of the Government of India that in spite of the corresponding increase in the import duty on foreign sugar, the position of the sugar industry is in a precarious condition and has reached a crisis. It, therefore, requests the Government to take steps to stop the import of foreign sugar as otherwise a heavy quantity will have to be carried forward that will cause loss to the industry to the extent of several crores of rupees.”

The Government while agreeing to restrict the import of Java sugar as stated above, observed in their communique, in August, 1940, that they decided not to enhance the protective duty.

Increase in Railway and Steamer Freights.

In February, 1940, there was a general increase of 12½ per cent. in all railway freights and fares, and also steamer fares. Sugar was also affected adversely, but representations of the industry for exemption from general increase in freights did not find favour with the Railway Board. This increase affects the industry in U. P. and Bihar to the extent of Rs. 30 lakhs per year. The Steamer services also increased their freights by 12½ per cent.

Labour Enquiry Reports.

Labour troubles experienced in 1939-40 by the factories were not very serious. The report of the Bihar Labour Enquiry Committee (of which the Chairman was Dr. Rajendra Prasad) was published in June, 1940, and it contained many recommendations for the improvement of labour and conditions of employment in the sugar industry. The report is since engaging the attention of the Government of Bihar

*In February, 1941, the Syndicate urged for a reduction in import duty! What a sudden change in views!

The Report of the Committee of Enquiry appointed in 1938 by the C. P. Government to investigate into the labour conditions of sugar factories was also published in two parts, first containing the recommendations made by the representatives of mill-owners and the latter containing the views of the growers' representatives.

Syndicate Takes Action Re. Malpractices.

The high minimum prices of cane, and the reduction of sugar prices suddenly made in the middle of 1940, left many factories in losses. While on the whole, the Syndicate controlled the sale of sugar by the various factories fairly well, there were large variations at times in regard to the quantity of sugar sold by the various mills, and instances were also not wanting when several sugar mills sold sugar in excess of the quota allotted to them and also at prices lower than those fixed by the Sugar Syndicate. Consequently, the Syndicate was compelled to take action against such malpractices with a view to prevent them, but due to the speculative activities of several sugar factories inspite of the imposition of fines and penalties by the Syndicate, such malpractices continued to the regret both of the Industry and the Government.

Syndicate decides upon Direct sales of Sugar.

Later in the year 1940, the Syndicate took more serious notice of such violations of the rules and made attempts to reduce malpractices by members as much as possible by threatening prosecution even, and after prolonged discussions extending over several months, the Syndicate decided to take direct sales of sugar in its hands, instead of selling the sugar through the agency of the mills, with a view to have a more effective control on the sales.*

Alterations in Basic prices, and prices of grades.

During the course of the year, the Syndicate also reduced from time to time the basic price of sugar, as also the selling price to suit

*At the Third Ordinary General Meeting of the Indian Sugar Syndicate Ltd., held on 2nd April 1940, the Chairman, Lala Karam Chand Thapar, observed as follows:—

"Whether it is for countering Java imports or for preventing wide fluctuations of sugar prices, direct selling by the Syndicate is a necessary corollary. To my mind, it is the only remedy for the evasion of Syndicate's regulations which in the present season, is taking place on such a large scale that it would upset all the plans of your Board and endanger the very foundations of the Syndicate. Many of you cannot gauge the depth of anxiety that your Board was in, at the last meeting on March 1, when they found 20 lakh maunds of unsold sugar in the

the requirements of the situation, and also altered the differential or prices between various grades of sugar.

Export of Sugar By Sea.

Several attempts were also made to arrange for the export of sugar to U. K. by approaching the Government of India for arranging for India being released from the obligations of the International Sugar Agreement. In October, 1940, the Government of India issued a *communiqué* stating that their request for partial relaxation from their obligations under the International Sugar Agreement was granted so as to enable India to export to the U. K. up to two lakh tons of sugar during the year ending 31st December, 1940 (referred to elsewhere). But the efforts of the industry proved of no avail, and it was not possible to export any sugar during the year 1940.

All-India Control for Regulation of Industry Necessary.

Above all, in view of the large overproduction, the need became imperative for an All-India control of sugar production with a view to regulate the development of the industry and to prevent chaos in it.

The Industry as also the Governments of U. P. and Bihar represented to the Government of India that their efforts at regulating the production of sugar would be of no avail, unless such legislation was enacted for control of production in the whole country, but the Government of India expressed their inability to take any action on the lines suggested by the U. P. and Bihar Governments.

Production Outside U. P. & Bihar Increasing.

It will be of interest to note that the production of sugar outside U. P. and Bihar is going up by leaps and bounds, and during the year 1939-40, the production of sugar in Bombay Madras, Punjab, Bengal, hands of members due, in no small measure, to malpractices indulged by a few individual members. Selling at under Syndicate's selling rates and selling beyond quota are both indulged by them under cloak of their selling agents. Verbal sales are made for forward delivery and actual contracts written in the month of delivery. These are only a few of the many methods by which the regulations of the Syndicate are got round against the interests of members who are loyal to the Syndicate. Although your board proposed to punish offences against Syndicate's regulations severely this time and the amendments to Articles have been proposed to make the consequences of such evasions more dangerous, still, the only short and swift remedy lies in direct selling by the Syndicate. Through direct selling by the Syndicate, the problem of Java sugar and the problem of meeting outside competition can also be easily solved."

Assam, Orissa and the Indian States went up to 2,60,100 tons as compared with 2,19,900 tons in the previous year.*

No Tariff Board Enquiry.

The Government of India announced in October, 1940, that owing to the prevalence of abnormal and unsettled conditions in the industry and as a result of the war, it would be extremely difficult for the Tariff Board to obtain proper data. In the case of sugar industry conditions were, apart from any influences due to the war, far from stable. In these circumstances, the Government of India considered that any Tariff Board enquiries would be of very little value and accordingly decided not to set up Tariff Boards in connection with the sugar industry as also other industries.

Present Quantum of Protection to Continue.

The present import duties on sugar are due to expire on the 31st March 1941, but the Government of India are committed to give

*While the high minimum price of cane fixed by the Governments of U. P. and Bihar ameliorated the conditions of the cultivators during the last 2 years inasmuch as their profits went up to 150 per cent. in some cases, the evil possibilities inherent in such high cane prices were either overlooked or ignored or underestimated by the Governments of U. P. and Bihar. The Chairman of the Indian Sugar Syndicate observed at the General Meeting held on 2nd April 1940 as follows:—

"The Governments overlooked the repercussions of high prices in other provinces, in their anxiety to secure for growers a partnership in profits with factories through the sliding scale which is in a sense a statutory deed of unequal partnership. We members should feel extremely concerned at the expansion of the Sugar Industry in other provinces, at the increasing disadvantages we experience in exporting high priced sugar to those provinces. The mills in outside provinces have extended enormously and the latest estimate of their production shows that in Bombay, Bengal, Madras and Indian States, the production is going to be 87,000 tons more than last year.

The warning uttered by the Tariff Board in their report is worth quoting:—

"There is, in fact, a conflict of interest between factories in U. P. and Bihar and factories in other provinces. If, owing to the fixation of minimum cane prices at a higher level, the cost of manufacture of U. P. and Bihar factories is increased, their ability to compete in external markets will proportionately diminish".

The high level of prices of sugar cane in U. P. and Bihar has been incessantly pressed on the attention of the Governments of these two provinces and it was foreseen that if prices of cane at this level continue, this industry should necessarily shift to provinces which are more favourably situated in this respect. The high figure of production of sugar outside the provinces of U. P. and Bihar bears out this forecast".

adequate protection to the sugar industry upto 31st March 1946. We presume that the present rate of import duty on sugar *viz.*, Rs. 9-12-0 per cwt., will be continued till 31st March 1946.

In this connection, we are pleased to note that the suggestion made by us on page 161 of our 1939 Sugar Industry Annual and in the preface thereof, pointing out the futility of a further Tariff Board Enquiry at this stage has been appreciated by the Government. We only hope that the Government will decide *immediately* about the quantum of protection to be given to the industry for the entire period ending 31st March, 1946, and announce it immediately with a view to remove the uncertainty and suspense of the industry in this respect.*

Excise Payment Postponement (described loosely as Rebate) of Rs. 1 per maund granted by U. P. and Bihar Government on unsold sugar with factories from 25th August, 1940.

During the year 1940 the U. P. and Bihar Governments decided with the consent and help of the Government of India to assist the

*The Indian Sugar Syndicate adopted the following resolution suggested by Mr. M. P. Gandhi, who was one of the Directors and forwarded the same to the Governments of U. P. and Bihar in February 1940:—

"As a result of the outbreak of War and the prevalence of abnormal conditions in the Sugar Industry and various other industries in the country, the Sugar Control Board recommends to the Governments of United Provinces and Bihar to urge upon the Government of India the futility of conducting a further Tariff Board enquiry for determining the measure of protection required for the Sugar Industry, as observed in the statement of objects and reasons appended to the Sugar Industry Protection Bill, 1939. The Sugar Control Board feels that the Tariff Board is not likely to be able to obtain any reliable information either in regard to (1) the cost of production of cane, or (2) the approximate cost of manufacture, which depends upon various factors, or (3) in regard to the price at which sugar can be imported in India, owing to abnormal conditions due to the war. The Control Board, therefore, feels that the attention of the industry should not be distracted in the direction of preparing a case for the consideration of the Tariff Board, and suggests that the Government of India should take suitable action themselves for giving the industry such adequate measure of protection as is required by it, during the next six years ending 31st March, 1946, and further that they should make an announcement in November, 1940, in regard to the protection to be given to the industry during the entire remaining period, so as to remove the uncertainty in this respect."

sugar industry of these provinces, by assuming immediate responsibility for payment to the Government of India, of Re. 1/- of the Excise Duty payable on each maund of sugar manufactured during 1939-40 season, and then lying unsold with the factories, with effect from 25th August, 1940, *vide* Government's comprehensive *communiqué* issued on 21st August, 1940 given at the end of "Sugar Industry at a glance". Government decided to recover this subsidy from the industry in accordance with the scheme framed in consultation with the Sugar Syndicate by increasing the cane cess in the subsequent seasons. The Governments amended the Sugar Control Act in 1940 and provided for the realisation of the subsidy from the industry by means of advance from the Government of India through the imposition of a special cess of six pies per md. of cane in subsequent seasons.*

U. P. & Bihar Sugar Factories Control Act Amended and Extended to 1944.

The U. P. and Bihar Sugar Factories Control Acts were to expire on 30th June, 1941. The Governments of U. P. and Bihar decided to amend the Act and stated their explanation in the Statement of objects and reasons. They observed that the sugar industry has passed through an exceptional period during the season 1939-40 and in view of the importance of the industry in the agricultural economy of the provinces, the governments have had to assume much wider

*The position of the industry in U. P. and Bihar became so precarious as a result of the imposition of the additional excise duty of Re. 1/- per cwt. that a section of the sugar industry could not afford to pay even the previous excise duty of Rs. 2/- per cwt. let alone the increased rate of Rs. 3/- per cwt. The Governments of U. P. and Bihar were worried both at the state of the industry, and the apprehended plight of a large percentage of the cane cultivators during the next season as a result of the possibility of sugar factories not being able to crush a bulk of the cane during the ensuing season on account of crippled resources and large overproduction of sugar during the season. The only solution for remedying the present stock position lay in forcing factories to sell their sugar at from Rs. 1/- to Rs. 2/- below its cost of production by offering them an excise rebate of Re. 1/- per maund. For this purpose the provincial Governments of U. P. and Bihar borrowed from the Central Government at 3% per annum approximately Rs. 150 lakhs and passed this sum on to the factories temporarily to cover a part of their loss, on the understanding that the subsidy now given in the shape of a loan is recovered over the next two seasons by means of a special cess on the cane, and interest at the rate of 4 per cent. per annum.

Mr. Aitken, President of the Indian Sugar Mills Association observed in his speech at The Annual Meeting in Cawnpore, on the 14th September 1940 that "this method of overcoming the difficulties brought about as a result of the two Governments' control policy and the mis-handling thereof is a most peculiar one".

control over the industry. The U. P. and Bihar Governments held joint consultations for enacting a comprehensive revision of the Act with a view to

(1) provide for the control of production and sales of sugar,

(2) provide for the realisation of the subsidy to the industry by means of advances from the Government of India through the imposition of a special cess of six pies per md.

(3) empower the Provincial Governments to relax conditions of the Act in certain special circumstances with a view to facilitate production of sugar for purposes of export. The Governments also stated that they are rectifying such defects as they found in the late acts as a result of the experience gained during the last three years.

The amendments incorporated the provisions for the constitution of a Sugar Commission, for increasing the cess limits for the realisation of the Excise rebate (postponement?) granted since August, 1940, with the objects of enabling them to dispose of their stocks of 1939-40 sugar at reduced prices which Government desired to be in the neighbourhood of those likely to prevail in 1940-41.

A section has also been added enabling the Government to fix the price of sugar etc., to impose conditions in the crushing license regarding the manner in which sugar may be marketed, bagged or stored for sale etc. The Government have also taken powers to refuse to grant license to certain persons in respect of a particular factory if no application was made to renew for the preceding crushing season a license previously granted in respect of that factory etc.

Provision has also been made for varying minimum prices accordingly with a scale to be fixed by the Government after consulting the Sugar Commission, in consideration of the price obtained for sugar manufactured in a particular season.

A penalty upto Rs. 3/- per maund is imposed in the event of any breach by a factory in respect of failure to produce or sell sugar in accordance with the conditions of the license.

A penalty up to 0-2-0 per maund of cane has also been provided in case of cane crushed by a factory exceeding or falling short of the specified quantity.

Thus the Governments of U. P. and Bihar have assumed a far wider control over the industry.

Rebate in Port Markets in 1940.

Towards the end of the 1939-40 season the Syndicate also allowed a rebate of 0-12-0 annas per maund of sugar despatched and sold to Bombay from November 20, 1940 onwards. The reduction was necessitated by the fact that sales of Syndicate sugar in Bombay dwindled considerably towards the end of the season and it became apparent that unless prices were brought into conformity with those likely to prevail for the new season's sugar in the immediate future there would be little chance of Northern-Indian sugar finding a market in Bombay.

Restrictions of Import of Sugar in Burma.

In October, 1940, the Government of Burma issued a notification prohibiting imports of sugar to Burma from all countries including India except under license. The industry took exception to this notification, but it was found on a reference to the Government of India that the Burmese Government had taken such action, being greatly concerned, lest continued imports on an abnormal scale should have such adverse effect on the ability of the Burmese mills to absorb sugarcane as to lead to serious agrarian trouble. Action having been taken for the purpose of public security, the Government of India declined to take any action. The import duty in Burma is Rs. 9-4-0 per cwt. only, and the excise duty is Rs. 2/- per cwt.

The Power Alcohol Act, 1940. (Act VIII of 1940).

In August, 1940, His Excellency the Governor of the United Provinces gave his assent to the Power Alcohol Bill which was passed by the Provincial Legislature in October 1939, in order to make provision for controlling the production, supply and distribution of Power Alcohol in U. P. and to make its admixture with petrol in certain specific proportions for use as a motor fuel compulsory. No change was made in the text of the Power Alcohol Bill which was enacted in the same form. The text is given in the 1939 Sugar Industry Annual (page 79).

On the 10th August, 1940, the Government also published a draft of the rules they proposed to make. It appears from the rules that the Government intends to invite tenders for the exclusive privilege of supplying Power Alcohol to the Government for 3 years, the tenderer being allowed to manufacture Power Alcohol on the terms of the required license which he will have to secure if his tender is accepted. It appears the requirements of the Power Alcohol have been calculated on the assumption that the prescribed mixture will contain 20 per cent.

of Power Alcohol and 80 per cent. petrol, the total consumption of which latter is estimated at present at over 6 million gallons in the United Provinces. It also appears that the operation of the Act will in the first instance be confined to the Districts of Agra and Meerut Divisions and some Districts of Rohilkand Division as it is expected that about 6 lakhs gallon of Power Alcohol equal to a little less than half on the total annual requirements that would be available in the area.

On the 4th September, 1940, a conference of the oil interests was held at Lucknow to discuss the details of the Power Alcohol Act. Several difficulties were apprehended in the scheme in connection with the securing of the necessary equipment such as tankage etc. Following a conference held at Nainital on the 4th October under the presidency of Mr. Pannalal, I.C.S., Adviser to the U. P. Governor, for considering the U. P. Power Alcohol Rules, it was understood that at the present time there was the possibility of only the Meerut Distillery manufacturing Power Alcohol and of only a few districts being selected in the beginning for the opening of mixing depots.

It is expected that production of power alcohol will begin in 1941 April.

Power Alcohol Act amended.

On the 10th November, 1940, the U. P. Power Alcohol (Amendment) Act, 1940, (Act X of 1940) was promulgated for general information. In the statement of objects and reasons it was stated that the U. P. Power Alcohol Act (Act VIII of 1940) required amendment in three respects. Firstly, it was considered desirable to exempt all military requirements from its operation. Secondly the supply of power alcohol for the whole province was at present not possible and the power to enforce the Act in a part of the province and also the power to enforce it piecemeal were needed. Thirdly, in the public interest it was felt necessary to make provision in the Act for a contingency which may arise when there may be a breakdown in the supply of the prescribed mixture of power alcohol and petrol. The amending Act makes provision for the above requirements. The following* amendments have been made in the Act.

*In section 1 of the original Act for sub-section (3) the following has been substituted:

"(3) The Act or such portion or portions thereof shall come into force in such area or areas on such date or dates as the Governor may by notification in the official Gazette, specify."

The following new provision has been made for exempting the requirements of the naval, military and air forces from the purview of the Act:

"(4) Nothing in section 3 or section 4 shall apply to the sale or use of petrol without admixture with power alcohol for the requirements of His Majesty's naval, military and air forces."

The following section empowering the Collector of a district to take the required steps in case supply fails has also been incorporated in the new Act:

"10-A. Notwithstanding the provisions of subsection (1) of section 3 and sub-section (1) of section 4 when for any cause there is a failure in the supply of petrol with the prescribed admixture of power alcohol in any district, the Collector may, subject to any rules that may be made in this behalf, authorize the sale and use within his jurisdiction of petrol without such admixture for such period as he may deem fit, and may at any time withdraw or modify such authority or from time to time extend the period of such authority."

Minimum Daily Wage.

The Government of U. P. issued a press communique in January, 1940, drawing the attention of all sugar factories to the fact that under the Sugar Factories Control Act they have the power to prescribe conditions of labour in the crushing license granted to sugar factories. While not fixing a minimum price under Section 11(e) of the Act, they expressed the hope that all factories would pay to the workers a minimum wage of 5 annas per day.

The Indian Sugar Syndicate also recommended to its members, both in U. P. and Bihar, that they should pay a minimum wage of 5 annas a day.

In December, 1940, the U. P. Government fixed the minimum wage to be paid to workmen in sugar factories, whether employed directly or indirectly by the licensee or through a Contractor, at six annas a day.

Rebates in prices of sugar in Port markets.

During April, 1940, the Indian Sugar Syndicate took steps to protect the industry from the inroads of Java sugar in India, by

deciding to give a rebate of 0-10-0 per maund on the current selling rates in respect of sugar despatched to the ports of Bombay, Karachi, Madras, Cochin and Calicut, and 6 annas on sugar despatched to Calcutta and Chittagong. This concession was allowed only in order to protect the port markets was in force and between 23rd April and 18th May, 1940.

1939-40 a highly unfavourable season to factories in U. P. and Bihar.

Although the 1939-40 season was one of normal duration and although factories crushed *more cane than in any previous season*, from the point of view of profits to the majority of factories, the position was a highly unfavourable one.*

Maximum production of sugar and maximum crushing of cane.

The maximum production of sugar and the maximum crushing of cane was done in 1939-40. The production of sugar was nearly double the production of 1938-39 (to be precise, the increase was about 91 per cent.). *The production has been the highest ever attained by the cane sugar factories in India*—the previous highest record being of the year 1936-37 when 11,11,400 tons of sugar were produced by the cane factories. Thus the previous record of 1936-37 was also beaten by 12 per cent., whereas the production of 1936-37 and 1938-39 is exceeded by 33 per cent. and 91 per cent. respectively.

The production of factory sugar from U. P. and Bihar, the two chief sugar producing Provinces of India, was about 79 per cent. of the total factory sugar produced in India, in 1939-40 as compared with 74 per cent. in 1938-39. If the production of sugar from *khandsari* and *gur*-refineries is included, the production of sugar from U. P. and Bihar will work out to about 77 per cent. in 1939-40, and 73 per cent. in 1938-39, of the total sugar produced in the country.

As explained above, the causes for such a record output of sugar were (1) a larger number of factories working during 1939-40, *viz.* 145 as against 139 in the previous season (2 factories were new factories), (2) factories generally crushed more cane than in any previous season, owing to abundance of cane, the average quantity of cane crushed by factories per working day being 710 tons in 1939-40 as against 630 in 1938-39, (3) the high minimum prices of cane fixed in the U. P. and Bihar diverted to the sugar factories large quantities of cane that would have normally gone for the manufacture of *gur*,

*The season was very favourable to factories outside U. P. and Bihar, as they made large profits.

and further, towards the end of the season when cane prices were reduced in view of the apprehended overproduction of sugar, and consequently a fall in its price, it was a condition of the reduction that the factories would crush all available cane.

Normal Duration of Cane Crushing Season.

The cane crushing season for 1939-40 was of a normal duration. The majority of factories in U. P. commenced crushing by the end of November 1939 (some did in the first fortnight of November), while in Bihar most of the factories started by the second week of December 1939. In the Provinces outside Bihar and U. P. six factories commenced crushing as early as October, 1939. In U. P. and Bihar about 16 factories stopped working by the middle of April 1940, which about 69 factories stopped working by the 5th of May 1940. A few factories continued crushing till the end of May 1940. The (mean) number of working days of factories in the U. P. increased to 133 as compared with 77 in the previous season; in Bihar to 136 as compared with 79 in the previous season and in All-India 129 as compared with 83 during the previous season. The minimum number of days was 203 in *All-India*, as compared with 184, during 1938-39. It 43 respectively during the 1938-39 season. The maximum number of days was in *All-India*, as compared with 184, during 1938-39. It must be observed here that the Mysore factory and one factory in Madras which worked almost throughout the year have been excluded. The Mysore factory worked for 267 days.

Increase in average crushing capacity.

The average daily cane crushing capacity of factories in U. P. was 770 tons as compared with 680 during the previous season, in Bihar 800 tons as compared with 710 during the previous season, and for *All-India* 710 as compared with 630 during the previous season, i.e., 1938-39.

Average Recovery improves.

The average percentage recovery of sugar from cane during 1939-40 increased in the U. P. from 9.14 in 1938-39 to 9.37; in Bihar from 9.00 in 1938-39 to 9.29, and for all-India from 9.29 in 1938-39 to 9.45 in the current season. The maximum recovery for the season was 12.37 per cent. as compared with 12.25 per cent. during the preceding season, i.e. 1938-39. The *All-India* average recovery for 1939-40 viz., 9.45 per cent. is higher than the 2 preceding seasons but lower than the average recovery in 1936-37 when it was 9.50.

Number of Factories working in India in 1939-40.

While the number of factories working in 1933-34 suddenly sprang up to 112 from 57 in 1932-33, the number of factories actually working in 1934-35 was only 130, in 1935-36, 137, in 1936-37, 137, in 1937-38, 136, in 1938-39, 139 and in 1939-40, 145.

Three factories were working in Burma in 1939-40 as against 2 in 1938-39, the quantity of sugar produced in 1939-40 in these factories being 27,700 tons as compared with 21,800 in 1938-39. The number of factories in Burma, and their production is not included, after the year 1937-38.

The number of factories in U. P. and Bihar was 102 out of 145 working throughout the country.

In the season 1939-40, 145 cane factories worked out of a total of 158 factories existing in India; 12 factories did not work during the season, and one is a small experimental factory in the U. P. for training students with a nominal and uncertain output and has therefore been ignored.

Sufficiency of sugar production.

A glance at the table* regarding production of sugar in India during the last few years will show that the existing factories in India have a capacity for producing enough sugar to meet the full requirements of the country at present, and even more. If the existing sugar factories are able to work for a period of 130 days, which, the Tariff Board suggested, may be taken as the average number of working days, it would be possible for the sugar factories to produce sugar to the extent of about 15 lakhs tons, which is considerably higher than the present estimated consumption of sugar in India.

Existing factories enough at present.

In view of this position, there is no necessity at present of any extensions to the crushing capacity of factories or additions of new factories to meet the requirements of sugar in the country. In fact, the stage has definitely been reached when India should find export markets, by land as well as by sea, outside India, if her present factories are to be kept working at their full capacity.

Future of Industry in Regulation of cane-crop and sugar.

The future of the industry lies in regulation of production of sugar, and of the cane-crops from year to year. A glance at the

*Vide Table NO. I in the "Sugar Industry at a Glance."

figures of production of sugar for the last few years will show how greatly the total production has been fluctuating during the last few years. This is due among other reasons to the fact that the industry is not properly regulated and that there is no previous planning for production both of sugar cane and of sugar in accordance with the requirements of the country. The cane crop has been also varying in size during the last few years and needs proper regulation. It is also equally essential to take vigorous action in regard to the improvement of the cane crop in various ways, referred to in succeeding pages, if the industry is to be stabilised before long. Increased amount of money should be spent on further research work for improving the quality of cane by providing, for instance, the cultivators with sound, healthy, hardy, and disease-free seeds of early ripening and late ripening varieties, suitable manure, facilities for irrigation, etc. in order to increase the *average* yield of cane per acre which at present is only about 15 tons to at least about 50 tons in order that the cost of production of cane may be appreciably reduced. It is the bounden duty of all concerned with the industry, *viz.*, the manufacturers, the agriculturists, and the Government to realise the fact at once that the entire future of the sugar industry in India hinges upon the improvement of the cane crop and reduction of the price of cane which works out to about 60 per cent. of the price of sugar.

Industry cannot rest on past oars.

While it is true that the industry has made magnificent progress during the last 8 years, it cannot afford to rest on its oars, and it must exert its best to maintain its position so that it may be enabled to elist, with the aid of a minimum tariff before the period of protection expires on 31st March, 1946. The present level of protection is doubtless very high and it would not be a matter of surprise if the Government of India decided to reduce the protection, with the object of safeguarding the interests of consumers. The industry should prepare itself from now for such a contingency. Indeed it must also be observed that a certain section of the industry is definitely in favour of tariff protection being reduced further, in the expectation that it will lead to improvement in the internal situation in the industry*.

Problems before the Industry.

We may refer here to the various important problems which are now confronting the industry and to the solution of which it should

*In February, 1941, the Syndicate asked for a lowering of import duty on sugar, largely with a view to prevent U. P. and Bihar fixing high minimum price of cane which encourages production in other areas.

devote its serious attention immediately. We would give the pride of place to:

1. Regulation of the cane crop and of sugar production by a careful planning, for the purpose of preventing overproduction of sugar, either by restrictions on establishment of new factories or by extensions to the plants of existing factories, or by assignment of quotas among all factories in the country, either by All-India legislation or a private agreement amongst the factories, with a view to avoid fluctuations in production from year to year.

Other problems may be stated as follows :—

2. Improvement of the quality of cane and the average yield per acre to at least 50 tons per acre and eradication of pests and diseases of cane.

3. Reduction of the cost of production of cane to about 0-2-9 per maund.

4. Development of improved varieties of cane in Reserved areas for factories in the U. P. and Bihar, and in close vicinity of factories in other part of India.

5. Provision of demonstration farms for cultivation of different varieties of sugarcane, in close proximity to the factories for experimental purposes, and distribution of hardy and healthy seeds of early ripening and late ripening qualities suited for various areas from the factory farms.

6. Large supplies of fresh and rich cane with high sucrose content from areas adjacent to mills which would yield larger recovery, and acquisition of land in the vicinity of factories for research or production of suitable cane.

7. Provision for irrigation of tube-wells, drainage facilities and better roads, and removal of municipal tolls, etc.

8. Dissemination of knowledge amongst the cultivators regarding manuring, crop rotation, ratooning of the cane-crop, electro-culture, suitable fertilisation, modern agricultural implements and methods for eradication of diseases in cane-crop, and plantation of improved varieties.

9. Extension of the duration of cane crushing season for factories from 4 months as at present to about 7 months in a year, by development of early ripening and late ripening varieties of cane.

10. Chemical, Technological and Agricultural Research on a comprehensive scale for increasing the recovery percentage of sugar, efficiency of plants for extracting maximum sucrose and the cultivation of improved varieties of sugarcane, and for studying scientific methods of combating and elimination of cane pests.

11. Establishment of a Central Research Institute for U. P. and Bihar for cane development, for testing of seedlings and undertaking breeding work for U. P. and Bihar, as is being done in Coimbatore for drought resistance, for hybridisation by crossing sugarcane with bamboos and with sorghum etc. etc.

12. Utilisation of molasses, particularly for manufacture of power alcohol, and of bagasse.

13. Necessity of good feeder-roads, tramways and aerial ropeways for quicker and cheaper transport of cane and abolition or reduction of Municipal and local tolls in various places on cane carts.

14. Utilisation of the proceeds of the Cane Cess for suitable development of cane in U. P. and Bihar through a representative Committee consisting of representatives of the industry and agriculturists.

15. Regulation of production of cane, and of sugar, from year to year in order to avoid cycles of over-production and under-production, as far as possible, in the interest of the stability of the industry.

16. Scientific marketing of sugar and control of sugar prices in a manner which would avoid wide fluctuations from year to year.

17. Evolution of an efficient and scientific Common Sales Organisation which would undertake *direct* sales and distribution of sugar in appropriate quantities in the various markets, avoiding criss-crossing of the traffic and thus economising in freight charges.

18. Proper location of factories at suitable places, all over the country.

19. Co-operation of railways and Steamship Companies in reducing freights and grant of other facilities like sufficient supply of suitable wagons for transport of sugar, cane, molasses, sulphur, lime, gunny bags etc.

20. Necessity of adoption of a long term policy which would lead to a progressive reduction in the prices of cane and also of sugar

with a view to eliminating the necessity of the present high tariff at an early date.

21. Evolving of a suitable method of fixing minimum prices of cane, at a level which would give a fair return to the cultivator and would ensure stability of the industry.

22. Standardisation of quality of sugar and of improvement therein, and improvement of quality of *Gur* and its keeping qualities.

23. Propaganda for increased consumption of sugar by disseminating information about its nutritive qualities, by opening retail shops in suitable areas for selling sugar, by selling products made from sugar at cheap rates in industrial and agricultural areas, by educating people about other industrial uses of sugar and by developing subsidiary industries like the manufacture of confectionery, syrups, cubes, etc.

24. Necessity for vigorous development of cane areas reserved for the various factories in order that factories would receive their complete requirements of cane from such areas within a few years.

25. Improvement in *Khandsari* method of production.

26. Necessity of development of cane-co-operative societies for supply, and development of cane, in a manner which would ensure co-operation of factories with them.

27. Provision of adequate storage facilities to prevent dampness and deterioration of the quality of sugar.*

28. Acquisition of other markets like Nepal, Tibet, Afghanistan, Kashmere, Ceylon and Burma for Indian sugar.†

*It is interesting to note that the U. P. and Bihar Sugar Factories Control Rules make it compulsory for any new factory allowed to be established to build storage accommodation for at least one third of the estimated annual production of sugar at the factory.

†The average import of sugar in Ceylon is about 70,000 tons.

Last year no sugar could be exported to Afghanistan owing to high price of Indian sugar. As soon however, as the price of sugar in India is reduced, attempt should be made for exploring the possibility of exporting sugar to Afghanistan. The import of sugar in Afghanistan comes to about 20,000 tons per year, mainly from Java and Russia and consists of superior quality of sugar. During 1940, a small quantity of Indian sugar has been sold by the factories in U. P. to Afghanistan and negotiations are afoot for sale of about 10,000 tons more. The E. I. & N. W. Rys. have also reduced freights to help such export since in February, 1941.

Export to Nepal should also be encouraged.

29. Continuance of agitation for being released from the obligations of International Sugar Agreement at an early date, and acquiring of suitable preference in the U. K. market for Indian sugar.

30. Solution of problems created by Indian States *e.g.*, levy of an import duty on Indian Sugar entering in their territory with a view to encourage development of the industry in their area ; prohibition of import of Indian sugar in their territory in order to encourage import of sugar at ports in their territory, *e.g.*, Morvi State in Kathiawar etc., through diplomatic channels and through the agency of the Central Government etc. etc.

We suggest that the industry should direct its attention immediately to the problem of regulation of sugar production in a manner in which the production is uniform in so far as it may be feasible and arrange for a carry-over of 2 lakhs tons of sugar every season, in order to allow a margin for a poor cane-crop due to natural causes like shortage of rain or floods or the prevalence of diseases in cane etc. Under these circumstances alone, it will be possible for the industry to have a uniform price of sugar, uniform consumption and to avoid fluctuations which are harmful to the interests of all concerned. It is equally essential, now that the period of protection is nearing to an end, for the industry to devise means whereby it would be able to continue without the aid of a high tariff after 1946. Principally it is the duty of the government of U. P. and Bihar which are the two principal sugar producing provinces in the country, to prepare for this position in advance, and in order that the industry in these two provinces may be enabled (1) to continue to maintain its present position in spite of a lower tariff, and (2) to retain its markets in other Provinces, steps should be taken whereby the price of sugar-cane is reduced to the level of about 9-3-6 per maund.

U. P. and Bihar Governments to beware.

The high minimum prices of cane as were fixed by the Governments of U. P. and Bihar during the last 2 seasons would certainly ameliorate the condition of the cultivators and may even give them profits estimated at over 125 per cent, but there is no doubt that they will ultimately prove harmful in view of the fact that the industry will be driven out from U. P. and Bihar, by the stimulus it will necessarily give to production of sugar in other parts of the country at cheaper rates. We therefore invite the most serious attention of the Governments of U. P. and Bihar, who are now controlling the industry

The market to Burma has been restricted since September, 1940.

to a very large extent, to this aspect of the matter and to urge upon them the necessity of progressive reduction in cane price, *taking a far-sighted view of the matter*, for the purpose of maintaining the position of the industry and cultivators of cane in U. P. and Bihar. As a matter of fact, as a result of the policy adopted in the past, a great stimulus has already been given to the development of the industry in other parts in India and the production of sugar outside U. P. and Bihar is increasing rapidly. The U. P. and Bihar factories depend upon other provinces for the export of their sugar to the extent of about 75 per cent of their present production, and consequently, the extent to which the present importing areas expand the industry, the markets of U. P. and Bihar sugar will be restricted in those areas, and this would be very harmful to the industry in U. P. and Bihar. Virtually, it will mean either the closing down of a few factories in U. P. or Bihar or the restriction of production of sugar in these factories, (as has happened in 1940-41, by the introduction of quotas for production for each factory) and this will adversely affect the factories due to the increased cost of manufacture, and the cultivators by the restriction in the demand for cane.

Main advantage in U. P. and Bihar.

The U. P. and Bihar Governments should not forget that the *main* advantage of the industry in these two Provinces lies in the production of cane at a cheaper rate than in other Provinces, but if it is sought to be nullified by the fixation of high cane prices, by the levy of cesses, and by the imposition of other handicaps on the industry owing to the increasing measure of control imposed upon it, the industry may easily shift to or develop in other parts of India as a result of such artificial stimulus and this will mean a great blow to the agriculturists in U. P. and Bihar whose chief money-crop is sugar-cane.

All-India Angle essential.

We definitely feel that the problem of sugar is a very serious one at the present time and unless the matter is viewed *not from a Provincial angle as at present but from an all-India angle*, and unless suitable measures are at once adopted for regulation of the industry on an ALL-INDIA basis, the future of the industry in U. P. and Bihar, where the sugar-industry is controlled and handicapped in a variety of ways, is very dark indeed. There is bound to be an expansion of the industry in other Provinces to the detriment of the existing industry in U. P. and Bihar. It is in the interest of the

industry in U. P. and Bihar if it wishes to maintain its predominant position in the production of sugar, to take a fair-sighted view of the situation and to arrange for a progressive reduction in the price of cane and consequently of the price of sugar to about Rs. 7|8|- per maund with a view to retain its markets in other parts of the country, and, incidentally, to eliminate the possibility of abnormally high profits to factories in other Provinces and States which have no minimum cane prices, and other taxes and handicaps to bear, and thus to reduce the impetus for further development of the industry in those areas at the present time, particularly when the existing factories have to restrict the production compulsorily for want of markets, inspite of availability of cane, which has to be allowed to perish, unutilised.

Importance of Industry and Capital employed.

We might repeat with all the emphasis at our command that the ultimate success of the industry will depend on the harmony and co-operation amongst the various interests concerned, viz., the industrialists, cane cultivators, the various Governments, Provincial as well as Central, and the consumers, on an All-India basis. We cherish the hope that in appreciation of the clear, definite and tangible advantages which flow from the establishment of this great national industry in which about Rs. 32 crores of our capital is employed, to a very large number of cane cultivators, industrialists, technical men, skilled and unskilled labourers, the public and the country in general, such co-operation will be spontaneously forthcoming, and that the industry will be able to attain a high degree of efficiency before long and to establish itself on a firm footing at an early date.

Before turning our attention to the various problems confronting the industry and to the directions in which its efficiency should be enhanced, it would be instructive to survey the course of the industry during the last crushing season, viz., 1939-40.

All-India Production of Sugar direct from cane during 1939-40.

During the 1939-40 season, 145 cane factories were working as compared with 139 in 1938-39 and 136 in 1937-38. The total production from cane factories is expected to be 12,41,700 tons, an increase of about 91 per cent as compared with the production in 1938-39 namely 6,50,800 tons. We have discussed in the preceding pages the causes for such a large increase during the year in the production of sugar *which has been the highest in the history of the sugar industry in India*. The condition of the cane crop was normal except that in the earlier part of the season the crop was affected by

red-rot in Bihar and the Gorakhpur Division of the United Provinces. The disease was however brought under effective control towards the middle of the season. The number of days of actual working in 1938-39 was considerably higher than the previous year. This has been given in a table in the "Sugar Industry at a Glance".

The average number of working days for the whole of India during 1939-40 was 129 as compared with 83 only, during the previous season.

History of fixation of cane prices in 1939-40

The Governments of U. P. and Bihar both announced the minimum price of cane during the first fortnight of November 1939, in accordance with the revised sliding scale accepted by them at a high level of -8|9 per maund for cane purchased at the gate of the factories (or within a radius of 5 miles therefrom in the case of Bihar). The industry felt that such high minimum price of cane was detrimental to the industry and convened a conference for considering what appropriate action should be taken. On the 8th of December, 1939, the Governments of U. P. and Bihar announced their decision to take the average of all available market quotations of first grade sugar (instead of 10 highest quotations) for determining the price of cane according to the sliding scale and they further decided to make an allowance of -4|6 per maund of sugar on account of the rise in prices of raw materials consequent on the outbreak of the war. The Governments also announced their willingness to grant deductions from the minimum price of cane in particular areas on account of damage to cane from diseases and pests in accordance with the extent of the damage to the cane-crop. Except for these two minor concessions, the cane prices were fixed during the second fortnight of November strictly in accordance with the sliding scale* at -8|9 per maund and they were further raised in the first fortnight of January to -10|9 per maund in U. P. and -10|6 per maund in Bihar. The industry sent telegrams of protest pointing out that the prices were very unfair and inequitable to the factories. The prices, however, remained high till the end of February 1940. When the Government

*The All-India Sugar Conference held at Simla in June, 1940, generally did not favour the present system of sliding scale under which cane prices were related to the price of sugar. It was considered desirable to fix a 'fair' price, (instead of the 'minimum' price) at a flat rate throughout each season, on the basis adopted in the Tariff Board's Report with the additional provision, if necessary, for deferred payments to be made to the cultivator, at the end of the season, on the results of sugar prices.

of India increased the excise duty on sugar by Re. 1/- per Cwt. with effect from the 1st March, 1940, the U. P. and Bihar Governments announced a reduction of -|-9 pies per maund in the cane rates with effect from the 3rd March 1940. The industry represented that this was not adequate and urged the Government to reduce the cane prices by at least -|1|3 per maund. Even after this reduction of -|-9 pd. per maund the price of cane continued to be high till 10th April 1940 when it was -|8|9 per maund. By this date, it became clear to the industry that large stocks of sugar would remain in the hands of the factories and it appeared certain that in view of such an abnormally large carry-over estimated at over 3½ lakhs of tons, the price of sugar would fall and the factories would lose lakhs of rupees on the stocks carried forward to the next season. The matter was considered by the Sugar Syndicate on 2nd April, 1940, and negotiations were held with the Government for special reduction in cane prices. On the 10th April, 1940, the Governments of U. P. and Bihar issued a joint communique agreeing to reduce the prices of cane from the 11th April to -|6|3 per maund up to 30th April and -|5|6 per maund thereafter on condition that the entire quantity of cane would be crushed by the factories. The Governments also asked the factories to maintain separate accounts of cane delivered to and taken by the factories in respect of all supplies made after the 11th April 1940.

Throughout the entire season the cane prices were fixed at a very high level and this has had a very adverse effect on the earning capacities of the factories during the season.

During the year both the Governments of U. P. and Bihar allowed deductions from the minimum price of cane on the ground of inferior quality of cane and the Bihar Government even amended their rules.

The Governments of U. P. and Bihar continued to levy a cess on cane of -|-6 per maund till the 10th April, 1940, after which it was not levied for the remainder of the season.

In the Province of Madras the Governments fixed a minimum price of Rs. 12/- per ton for all varieties of cane. This was done only for the Hospet area. (*Vide* Notification dated 9 December, 1939).

In 1938-39 season, Rs. 9-8-0 per ton was the minimum price fixed for CO 290 and other Coimbatore varieties, and Rs. 8-8-0 per ton for Ratoon cane.

The Government of Madras also thought of fixing a sliding scale of prices of cane, linked with the price of sugar, in 1938, but in 1939

they decided, on representation from ryots as well as factories, not to do so, and fixed a flat rate for all varieties in the 1939-40 season.

In 1940-41, however, the Madras Government have again fixed a sliding scale, according to which minimum price of cane will vary every week, in the Hospet area.

The price per ton of cane is fixed at Rs. 7-4-0 when price of sugar is Rs. 220 per ton, and rises to Rs. 10-12-10 per ton, when price of sugar goes up to Rs. 300, and to Rs. 12-2-4 when price of sugar rises to Rs. 300 per ton.

The Table below shows the development in the number of factories and the total quantity of cane crushed from the preprotection period to the present day, and our own estimates for 1940-41.

TABLE NO. 1

Growth of Sugar factories and Sugar manufactured in India since 1931-32.

Season	Factories Working	Quantity Cane crushed	Quantity of Sugar produced (Cane Factory Production only)
	No.	Tons	Tons
1930-31	29	1,317,000	119,859
1931-32	32	1,783,000	158,581
1932-33	57	3,350,000	290,117
1933-34	112	5,157,000	453,965
1934-35	130	6,672,000	578,115
1935-36	137	9,801,000	932,100
1936-37*	137	11,687,000	1,111,400
1937-38	136	9,916,400	930,700
1938-39	139	7,004,800	650,800
1939-40	145	13,131,700	1,241,700
1940-41 (Our Est.)	147	10,500,000	1,000,000

The figures for the production for the season 1939-40 are estimates of the Director, Imperial Institute of Sugar Technology, published in the Indian Trade Journal dated 3rd October 1940. From our information also, it appears to us that his final estimate of the quantity of cane crushed and sugar produced in factories will turn out to be absolutely correct. The figures for 1940-41 are our estimates. We have estimated a decreased production for the year 1940-41 as the Governments of U. P. and Bihar have announced that the factories

*Burma excluded from 1936-37.

in U. P. and Bihar will produce 7,20,000 tons. The production in the factories outside U. P. and Bihar, will, in our opinion, be 2,75,000 tons at the maximum. Thus, in our opinion, the production during 1940-41 will be about 10 lakhs tons.

We are afraid, however, that in spite of the announcement of the Government of U. P. and Bihar that the factories in U. P. and Bihar will produce 7,20,000 tons of sugar during 1939-40, there may be reasons, political and economic, which may induce the Governments later in the season to ask the factories in U. P. and Bihar to crush more cane, as cane is bound to remain surplus in view of the large cane crop during the year. If this happens, however, it will be a further hardship on the factories which will find increasingly great difficulties in financing the stock of sugar as any increased production (in the absence of any fresh outlet) is bound to lead to a further fall in the price of sugar and the Banks which have agreed to finance production of sugar in U. P. and Bihar to the extent of 720,000 tons would necessarily create further difficulties for the factories which might be called upon to furnish larger margins. At the present time, the Governments of U. P. and Bihar have also announced their desire to compensate cane-growers whose cane is not crushed by the factories in view of the surplus cane crop. We hope that such compensation will give some relief to the poor cultivators whose crop will literally have to be thrown away in the absence of its utilisation, in the factories, or in the manufacture of gur, or khandsari sugar*

We expect that the production in 1941-42 will also be a small one as there will again be at the end of 1940-41 season, a carry-over of sugar estimated at about 4 lakhs of tons. For these reasons we expect the production of sugar in U. P. and Bihar during 1940-41 to be only about 5½ lakhs tons, and outside U. P. and Bihar about 3 lakhs of tons. If the size of the cane crop is also reduced, there will be less hardship to the cultivators and there will be a possibility of the problem of irregular surplus and short production of sugar being set right at the end of the 1941-42 season.

Provincial Analysis and Recovery Percentage.

During the 1939-40 season, the production of sugar in U. P. increased to 6,59,500 tons as compared with 3,20,300 tons in 1938-39

*We ardently wish, with Dr. Rajendra Prasad, that a larger bulk of the poor cultivators' cane should be crushed. There are likely to be serious difficulties, however, to the factories, unless export markets can be found.

and in Bihar to 3,22,100 tons as compared with 1,61,600 tons in the previous season. The total production of sugar factory in U. P. and Bihar works up to 79 per cent of the total production of factory sugar in India in 1939-40.

The recovery of sugar in U. P. during 1939-40 was 9.37 as compared with 9.14 in the previous season and in Bihar 9.29 as compared with 9.00 in the previous season. The average recovery in Bengal increased from 7.35 in 1938-39 to 9.23 but in Bombay the average recovery fell from 11.29 in 1938-39 to 10.97. (*vide* Table in "Sugar Industry at a Glance").

Comparative growth of the Sugar Industry in the various Provinces since 1931-32

The Table in the "Sugar Industry at a Glance" will indicate the growth of the industry in the various provinces of India since the year 1931-32. A glance at the table will show that the most important sugar production tracts in India are the U. P. and Bihar which between them have about 75 per cent of the total number of factories in India. Although the tropical area in which conditions are very similar to those in Java and the West Indies, would normally be the principal sugar-producing tracts in India, the case is really different. As the figures of the area under sugarcane will show about 81 per cent of the total acreage of sugar cane is grown in the subtropical area, viz., U. P., Bihar, Punjab, Bengal, etc. and about 8 per cent of the acreage under sugar-cane is grown in the tropical area, viz., Bombay, Madras, Mysore, Hyderabad, etc. in spite of the fact that in the latter the yield per acre is higher and the quality of cane superior (*vide* Tariff Board Report page 20). It is difficult to explain the reason for the concentration of sugar factories in U. P. and Bihar except the comparatively lower cost of cultivation of cane in the sub-tropical area. This advantage of the fertile soil of the Gangetic plain in U. P. and Bihar which is supposed to be the original home of sugar-cane, is so great that it has rendered insignificant the natural advantages of the tropical region.

Further Expansion Unnecessary.

A glance at the Table showing the production of sugar in India will indicate clearly that there is little scope for the establishment of new factories, at the present time and under the present conditions. It cannot be concealed however that there is prevalent a strong tendency for increasing the production of sugar in areas and tracts which at

present import their requirements of sugar from U. P. and Bihar. This tendency is strong particularly in the Indian States where serious efforts are being made for developing the cane cultivation and for establishment of factories by giving concessions of various sorts, etc., exemption from excise duty for a period of years, imposition of import duty on sugar entering the States, financial help for starting factories, absence of fixation of minimum prices of cane, free land, exemption from import duty on machinery, from income-tax, etc. A few factories are under construction in the States and it appears probable that unless steps are taken through diplomatic channels by the Government of India for discouraging the tendency of establishment of factories in the Indian States by such aid, no scheme of licensing of sugar factories *(which of course is not favoured by the Government of India at present) or of regulating development of the industry (the necessity of which cannot be over-emphasised) with a view to prevent over-production would be of much avail.

Extension favoured, when necessary, outside U. P. and Bihar.

We feel, however, that in order to satisfy the desires of provinces which have not been able to develop the sugar industry so far, an understanding should be arrived at that if and when more factories are necessary for producing larger quantity of sugar required for our consumption (or for exports if and when that is feasible) such factories should be located outside U. P. and Bihar (where no more factories or extensions to factories should be allowed) and in areas which are under-developed and which may have special advantages, etc., lower cost of production of cane, availability of suitable quality and quantity of cane, proximity to consuming markets, with a view to avoid freights etc. If, however, more factories are now established in other Provinces or States, or extensions are made to their capacities, it will be a very serious handicap to the factories in U. P. and Bihar which export about 75 per cent of their production to other areas. We therefore recommend with all the emphasis at our command that the U. P. and Bihar should take the greatest care to see that this possibility does not arise, particularly by the grant of a stimulus in the shape of high prices of sugar consequent on high prices of cane as in that case the position of the factories in U. P. and Bihar and consequently the

Vide, Speech of the Hon'ble Sir Ramaswami Mudaliar, Commerce Member, in the Council of State, in March, 1940.

At the All-India Sugar Conference held at Simla on 14th June, 1940, several provinces like Madras and Bengal opposed any scheme of restriction of the industry, as they were underdeveloped.

agricultural economy of these Provinces will be very seriously affected. A change in the territorial distribution of production will work greatly to the disadvantage of the present exporting areas and will create a very serious problem which will have adverse repercussions.

We therefore feel that the time is ripe when the Governments of U. P. and Bihar should take the lead in the matter and should persuade the Government of India to adopt an *All-India* policy of regulation of the industry, proper location of factories, and of planning measures which would not lead to overproduction and thus operate to the detriment of this great national industry which has been working magnificently so far.*

Area Under Sugar Cane.

Having commented on the growth of the industry in the various provinces, let us now turn to the raw material of the Industry, *viz.*, sugar-cane. Official statistics relating to the sugar-cane crop give only the area under cane and the yield of *gur*, no figures of the tonnage of cane being available. Even in respect of acreage of cane, the figures in some parts of India where the permanent settlement of land revenue is found are no better than guesses. While this is the position in respect of statistics of acreage, the position in regard to yield is still worse. At present, all crop-cutting experiments on which official returns of yield are based end in the weighment of *gur* and not of cane. With the available statistics, therefore, it is hardly possible to calculate the exact figures of the production of cane each year, as the weight of cane produced per acre varies with the locality as well as with the variety of the cane grown. Thus, neither of the two official figures of acreage and yield or *gur* can by themselves be used for making an accurate calculation of the total yield of cane, and the only recourse therefore for calculating the production of sugar-cane is to make use of the forecast figures of *gur* as the basis.†

The total area under sugar cane in 1939-40 is estimated to be 37,05,000 acres as compared with 31,30,000 or an increase of 16 per cent. The calculated production of sugar cane in 1938-39 is estimated at 43,10,000 tons as compared with 55,637,000 tons in 1937-38.

The total estimated yield of raw sugar (*gur*) stands at 45,47,000 tons as against 3,388,000 tons in 1938-39 or an increase of 34 per cent.

* In this connection also vide Tariff Board Report, page 29.

† This question was discussed at a meeting of the Sugar Committee of the Imperial Council of Agricultural Research, but no decision was arrived at for remedying this position.

The area planted under sugar cane in 1940-41 is estimated at 4,215,000 acres as compared with 3,705,000 acres (revised) for 1939-40, or an increase of 14 per cent.

The following table will show the detailed figures of the acreage and yield of *gur* in the various Provinces in India along with the yield per acre during the last two seasons.

TABLE NO. 2

Acreage under cane and yield of raw sugar (gur) for all Provinces in India, during 1938-39 and 1939-40.*

Provinces and States	Area (1,000 acres)		Yield (1,000 tons)		Yield per acre (lbs.)	
	1939-40	1938-39	1939-40	1938-39	1939-40	1938-39
	40	39	40	39	40	39
United Provinces (including Rampur State) ..	1,914	1,652	2,177	1,454	2,548	1,972
Punjab ..	414	354	304	229	1,645	1,449
Bihar ..	441	375	460	369	2,337	2,204
Bengal ..	316	299	526	439	3,729	3,289
Bombay (including Indian States) ..	129	114	326	274	5,661	5,384
Madras ..	132	98	358	274	6,075	6,263
North-West Frontier Province ..	71	51	79	57	2,492	2,504
Assam ..	38	38	41	38	2,417	2,240
Orissa ..	33	32	65	62	4,412	4,340
Central Provinces and Berar ..	30	29	45	45	3,360	3,476
Sind ..	7	7	14	14	4,480	4,480
Delhi ..	1	1	1	(a)	1,120	1,120
Hyderabad ..	36	29	75	64	4,667	4,943
Mysore ..	49	45	64	58	2,926	2,887
Bhopal (Central India) ..	5	4	6	4	2,688	2,240
Baroda ..	2	2	6	7	6,007	6,253
Total ..	3,618	3,130	4,547	3,388	2,815	2,425

In addition to the area for which particulars are given above, the crop is grown on a small scale in certain other tracts of India, the

**(Vide Final General Memorandum on the sugar-cane crop of 1939-40 appearing on page 578 of the 29th February, 1940 issue of the Indian Trade Journal).*

average area of which for the last 5 years has been estimated at 148,000 acres with an estimated production of 186,000 tons of gur (raw sugar).

The average percentage of the sugar-cane area under the various tracts to the total area under sugar-cane in India based on the figures for the 5 years ending 1937-38 is given below :—

United Provinces 53 per cent., The Punjab 12 per cent., Bihar 10 per cent., Bengal 7 per cent., Bombay 2 per cent., Madras 3 per cent.

In the table below we give the area under sugar cane, under improved varieties, Production of Cane per Acre, Gross production of gur, and calculated production of cane crop from 1930-31 to 1940-41.

TABLE NO. 3

Acreage under Sugar-cane, under improved Varieties, Production of Cane per Acre, Gross production of Gur, and Calculated Production of Cane-crop.

Year	Total acreage under sugarcane in thousand acres	Acreage under improved varieties in thousand acres	Average cane production per acre (In tons)	Gross production expressed as gur (In thousand tons)	Calculated production of sugar cane (10-11 factors) (In thousand tons)
1930-31	2,905	817	12.3	3,359	35,780
1931-32	3,076	1,170	14.1	4,116	43,316
1932-33	3,425	1,845	14.9	4,859	51,129
1933-34	3,422	2,295	15.3	5,055	52,455
1934-45	3,602	2,433	15.1	5,292	54,346
1935-36	4,154	3,056	15.3	6,102	61,202
1936-37	4,582	3,452	15.6	6,932	67,322
1937-38	3,869	2,968	15.5	5,579	55,637
1938-39	3,130	2,673	15.0	4,275	43,100
1939-40	3,705	2,800 ^(our Est)	15.0	—	50,000
1940-41	4,244	—	—	—	—

The total acreage in U. P. in 1940-41 is estimated at 2,393,000 acres and in Bihar 530,000 acres (*Vide* 2nd sugar-cane forecast 1940-41 issued on 7th November 1940). The area under improved varieties

of cane in the different provinces in the year 1938-39 works out to about 82.32 per cent. of the total area in 1938-39 against 75.27; 75.39 and 74 per cent. during the previous three years (*Vide* Indian Trade Journal, dated 30th May, 1940). Comparatively the largest percentage of the area under improved varieties of cane was found in U. P. where in 1938-39 1,621,000 acres were planted with improved varieties, as compared with 1,932,000 acres in 1937-38. In Bihar the area under improved varieties during 1938-39 was 343,500 acres as compared with 309,000 acres in 1937-38. It is also satisfactory to note that the production of cane per acre has steadily gone up (*Vide* Tariff Board Report, page 18). The increased cultivation of improved varieties of cane, has been responsible for increasing the yield of cane per acre from 12.3 tons in 1930-31 to over 15 tons in 1937-38.

Fluctuating area under Cane.

A reference to the previous table will show that the area under cane has been fluctuating greatly since the last few years. The reasons are several although it is very difficult to assign any precise reason for the fall or increase in the area in any year.

It can be stated however with a certain amount of certainty that the fluctuations in the acreage under sugar-cane are due partly to conditions of rainfall during the period of plantations, the prevailing prices of sugar-cane, the price of *gur*, as also the returns from alternate crops and the prospects of the price likely to be derived from the cane crop in the next season. The high minimum prices of cane fixed in U. P. and Bihar during 1938-39 were responsible for the increase in the area under cane in 1939-40 and the extraordinarily high prices of cane paid to the cultivators in U. P. and Bihar in 1939-40 were responsible for a still further increased cane-crop during the year 1940-41. We expect that as a result of the overproduction of sugar in 1939-40 and the decision to curtail production in 1940-41 and the great decrease (of over 50 per cent as compared with the previous season) in the minimum prices of cane in U. P. and Bihar during 1940-41, the cane-crop during the year 1941-42 will be considerably smaller and the cultivators will have to take to other alternative crops, in view of the necessity of the curtailment of sugar production in the year 1941-42 also, to reduce the huge carry over.

We also apprehend that even during 1940-41, a large quantity of cane will remain uncrushed and the cultivators in certain areas will suffer badly, notwithstanding the compensation which the Governments

of U. P. and Bihar desire to pay to the cultivators who are thus affected, as after all the relief thus given can only be small.

Condition of cane crop in U.P. in 1939-40.

The crop on the whole matured well except in the Gorakhpur division and the Districts of Bahraich, Gonda and Ballia where it was damaged by drought. In Bihar the crop was reported to have been affected by drought, and wilt in parts of Champaran and Saran. The yield for U. P. was estimated at 90 per cent. of the normal as against 71 per cent. during the last year and for Bihar at 87 per cent. of the normal. In Bengal some damage was caused to the crop by floods and insect pests in certain districts. In the Deccan in some tracts the crop suffered from inadequate rainfall and the yield was expected to be below normal.

Improved quality of cane essential for prosperity.

It is hardly necessary for us to stress the fact that the prosperity of the sugar industry in India depends to a large extent on the availability of disease-free cane of good quality with plenty of sucrose, and of early and late ripening varieties, in order that factories may be able to extend their crushing season from the present short period of about 4 months to at least 7 months. It is equally essential to check disease and pests which reduce the sucrose content to a large extent in the affected areas, and until this is done it is impossible to obtain a larger recovery. A diseased crop of cane means a loss both to the manufacturer and also to the agriculturists engaged in the cultivation of cane. While, no doubt, successful efforts have been made to improve the quality of cane during the last few years, it will generally be agreed that a lot more remains to be done for increasing the yield, particularly in the direction of educating the cultivator to adopt modern methods of cultivation, to get better seeds, to pay more attention to rotation of the cane crop, to manuring, to check insects, pests, and diseases, to check ratoons etc. We have referred to this subject in detail in the succeeding pages.

Duration of Crushing Season in 1938-39 in All-India.

An analysis of the estimated duration of the crushing season by the Director, Imperial Institute of Sugar Technology, (*vide* The Indian

Trade Journal dated 3rd October, 1940) shows that the average (mean) number of days on which the factories crushed in 1939-40 was 129 as against 83 in 1938-39. It should easily be possible for the industry to increase the length of the working season to a large extent, if attention is concentrated in that direction.

Fair Average duration of crushing season.

The Tariff Board has reported that 130 days is a fair average for the whole of India which should be adopted as an economical period of working in present conditions. In no case should the working number of days be allowed to fall below that level for it only leads to an increase in the cost of manufacture. During the year 1940-41 the factories in U.P. and Bihar are only expected to work for 97 days with a view to restrict the production to 720,000 tons as is decided by the Sugar Commission of U. P. and Bihar.

Uses of Cane.

We have seen above that the estimated total production of sugar-cane in 1939-40 was about 50,000,000 tons while the total quantity of cane estimated to have been crushed during 1939-40 by sugar factories was only about 13,131,700 tons. This of course represents a percentage of more than 26 per cent. but this year it was abnormal because a large quantity of cane was diverted to the factories from the manufacture of *gur*, in view of the extraordinarily high sugar prices in the beginning of the season in U.P. and Bihar. During the year 1938-39 the total percentage of cane crushed by the factories to the total cane crop may be estimated at about 15 per cent., the total cane crushed being 7,004,800 tons as against the total cane-crop estimated at 43,100,000 tons.

The quantity crushed for *gur* manufacture is roughly 4 times the quantity crushed by the factories, and represents about 60 per cent. of the total crop. It will be interesting to see the different uses to which the cane crop is put. Table No. 11 in the "Sugar Industry at a Glance" shows the various uses of cane along with the percentage of each to the total production for the last 7 years.

It is of interest to note however that the total percentage of cane crushed in factories in U.P. and Bihar in relation to the total cane

produced in these Provinces is different. We give these statistics below.

TABLE NO .4

*Percentage of cane crushed in factories to the total cane-crop in respective Provinces.**

Season	U.P.	Bihar	Bombay	Bengal	Madras	India
1934-35	13.2	30.9	8.0	2.7	5.0	12.3
1935-36	16.3	40.4	11.7	4.8	5.4	16.0
1936-37	15.6	49.3	13.0	5.2	6.0	17.6
1937-38	23	62.3	14.0	17.8
1938-39	22	44.5	(Our Est)	16.2
1939-40	33	71.1	(Our Est)	26.0

These figures will show in a correct perspective the importance of the cane-crushing factories in the agricultural economy, particularly in Bihar. So far, this fact has not been fully appreciated, owing to these statistics not being brought to the notice of all concerned, prominently. It must be noted that in some districts in the U.P. and Bihar where there is a congestion of factories, 70 to 80 per cent. of the cane grown, is crushed by factories.

Production of Sugar by Khandsari and from Gur.

Refined sugar is manufactured by three different processes in India, namely (1) direct from cane from modern vacuum pan factories, (2) from cane by indigenous open pan factories i.e., *Khandsaris* (through the intermediate process of *Rab*) and (3) from *gur* refined in modern refineries.

A reference has already been made to the production of sugar by the first method, i.e., direct from cane. In regard to the production of sugar by *Khandsari*, we have no definite and reliable statistics, but on the basis of the reports of the increasing operation of the *Khandsaris*, particularly in the United Provinces where the production is estimated to be about 60 per cent. of the total *Khandsari* sugar production in India (there is little *Khandsari* production in Bihar), we estimate that the production of *Khandsari* sugar during the year 1939-40 will be about 1 lakh tons, which is equal to the estimated production of the previous season. We expect that the production in 1940-41 of *Khandsari* sugar will be a little higher as the cane crop in U.P. and

*The figures for U. P. and Bihar for the years 1937-38 to 1939-40 are based on the data supplied by the U. P. & Bihar Governments to the Chairman, Sugar Commission, Cawnpore.

Bihar is too large to be crushed by the factories. We expect the production to be 125,000 tons during 1940-41.

In this connection it is of interest to observe that although the estimated production of Khandsari sugar is so large, the figures of the amount of the Excise duty collected during the last 5 years would point to a very small production. The total amount of excise duty collected from the production of Khandsari sugar in 1934-35 and subsequent years is given below :—

TABLE NO. 5

Year	Amount of Excise Duty collected from Khandsari.		
1934-35	Rs. 77,000
1935-36	" 60,000
1936-37	" 47,000
1937-38	" 51,000
1938-39	" 59,000
1939-40	" 135,000
1940-41 (Ten months)	" 179,000

The Budget estimate of the revenue from the excise on Khandsari sugar during 1939-40 was Rs. 6 lakhs as a result of the change made in the definition of "factory" in Section 2(a) of the Sugar Excise Duty Act, 1934, so as to omit any reference to the number of workers employed. The Hon'ble Finance Member observed in his Budget speech in February 1939 that the quantity of Khandsari sugar on which duty was paid was less than 2 per cent of the total estimated production of Khandsari sugar. In order that so much sugar may not escape the duty, the definition of "factory" was amended so as to omit any reference to the number of workers employed, and in order that no extra burden would be imposed on the small agriculturists who did not employ mechanical power in any of the processes of sugar production, the rate of excise duty was reduced from Re. 1|- to 8 Annas per cwt. The reduced excise duty came into force from 28th February 1939.

It is clear that in accordance with the excise duty collected from Khandsari sugar the quantity of sugar produced by Khandsari would only be of the order of about 13,500 tons in 1939-40. If the excise duty on the estimated production of Khandsari sugar (1 lakhs tons) is realised the Government of India should receive an amount of Rs. 10,00,000|-. According to the Government estimate, about 60,000 tons of Khandsari sugar would have paid excise duty in 1939-40, but this

expectation has not been realised. During the 10 months ended January, 1941, the excise duty collected from Khandsari* sugar has amounted to Rs. 1,79,000|- which means that 17,900 tons of Khandsari sugar has been assessed to duty. The Budget estimate of the yield of excise duty on *Khandsari* sugar during 1940-41 has not been shown separately. The estimated revenue from factory sugar and Khandsari sugar was of 5,25,00,000 rupees by the Hon'ble Finance Member in his Budget Speech in the Assembly on 29th February, 1940.

Definition of Khandsari Sugar.*

Under the Sugar Excise Duty Act, 1934, excise duty is levied on *Khandsari* sugar (i.e., sugar in the manufacture of which neither vacuum pan nor vacuum evaporator is employed) under Section 3(1) of the Act.

It would be of interest to note that 'sugar' for the purposes of this Act means any form of sugar containing more than ninety per cent of sucrose, and in order that the sugar may be taxable it must be produced in a factory which means any premises in any part of which any manufacturing process connected with the production, of sugar is being carried on or is ordinarily carried on, with the aid of

*It is a matter of regret that statistics of production of sugar by indigenous processes (collectively called Khandsari) are not available. The Imperial Council of Agricultural Research realised the great importance of such statistics and sanctioned a grant in November 1933 for taking a census of sugar produced by Khandsaris. At the instance of the Imperial Council of Agricultural Research, the Governments of U. P. and Punjab undertook to collect such figures for their respective provinces and we understand that during the year 1933-34, according to this enquiry, 80,000 tons of sugar were manufactured by Khandsari in U. P. and 4000 tons in the Punjab.

The rate of excise duty on Khandsari sugar which was 0-10-0 per cwt. from 1st April 1934 to 27th February, 1937 was increased to Rs. 1-5-0 per cwt. from 28th February 1937. It was reduced in April, 1937, to Re. 1|- per cwt. with retrospective effect from 28th February 1937. From 28th February 1939, the excise duty on Khandsari sugar was reduced to Annas 8 per cwt, but along with it the definition of "factory" in the Sugar Excise Duty Act 1934 was also amended with a view to make a larger quantity of Khandsari sugar liable to excise duty.

The definition of "factory" was amended by Clause (3) of the Indian Finance Act, 1939, and any reference to the number of twenty or more workers was omitted therein. (For the amended definition see the Sugar Excise Act in the 'Sugar Industry at a Glance'.

When the excise duty on factory sugar was increased from Rs. 2|- to Rs. 3|- per cwt. with effect from 1st March 1940, the duty on *Khandsari* sugar was kept at the same level i.e., 8 Annas per cwt.

power. The sugar produced by the purely agricultural section of the Open Pan Sugar Industry where work is carried on without the aid of power is not liable to Excise Duty. Similarly, products like *Gur* and *Rab* which do not contain 90 per cent of sucrose are not liable to the Excise Duty. It is well-known that several small sized vacuum pan concerns manufacturing Khandsari sugar were, in order to avoid the Excise Duty, so adjusting their business that they would not come within the provision of the definition of a 'factory'. With effect from 28th February, 1939, however, under the amended definition of 'factory', they will be liable to Excise Duty at the rate of 0-8-0 per cwt.

Position of Khandsari manufacture.

No minimum price has been fixed by the Governments of U. P. and Bihar for cane purchased by Khandsari factories. The price paid by Khandsari depends upon the locality. During 1939-40 some Khandsaris in U. P. purchased cane at 0|6||5 to. 0|7|11 per maund while those in Bihar at 0|6|9 per maund. This compares very favourably with the minimum prices paid by the factories in U. P. and Bihar varying from 0|8|9 to 0|10|9 per maund. Besides the *Khandsaris* have not to pay any cess which the factories have to pay at the rate of 0|0|6 and have not to incur other expenses by way of commission to co-operative societies and railway freight on out-station cane. The total cost of manufacture of Khandsari sugar may be taken at Re. 1|- to Re. 1|4|- per maund. The Tariff Board has given interesting figures on the cost of production of sugar by Khandsaris and open pan concerns. The average price of Khandsari sugar is about six to eight lower than the prices realised by factory sugar.

The Khandsari industry appears to be at an advantage in the interior areas, far removed from factories where cane is available cheaply and which cannot be disposed of in any other way. Amongst other advantages may be mentioned the following:—(a) negligible transport and other charges on cane (b) saving of 0|0|6 per maund on cane cess, (c) saving of Rs. 2|8|- per cwt. In sugar excise duty, (d) less transport charges on sugar which is consumed in areas in close vicinity., (e) some preference for Khandsari sugar by orthodox people.

The Khandsari sugar factories can be helped by the Government by improvement of the equipments and introduction of improved types of crushers, juiceboiling bells etc. by improvement of the methods of manufacture in order to improve the quality of the finished product,

by better facilities for getting the necessary equipment on hire and by better marketing facilities. The Imperial Council of Agricultural Research had sanctioned a grant of Rs. 1,67,380 for the establishment of a Sugar Research Testing Station for the indigenous system of gur and sugar manufacture for a period of 5 years ending in November 1941. A small grant was also made to the Govt. of Bihar for investigation into the possibilities of manufacturing Khandsari sugar by single pan method.

Sugar refined from Gur.

The third method of making sugar is by refining it from *gur*. Apart from 10 refineries throughout India, about 50 of the modern cane factories have got *gur* refineries plant, although only 5 of them actually refined sugar in the off-season of 1939 as compared with 3 in 1938. The average recovery of sugar from 100 tons of *gur* has been 60.94 tons in 1937 as compared with 62.17 in 1938. The manufacturing expenses for a maund of sugar in a refinery may be taken roughly at Rs. 1|8|- per maund. The cost of sugar refined from *gur* depends largely on the price of *gur* which necessarily bears no close relation to the price of sugar, and consequently refining of sugar from *gur* becomes a speculative proposition. Refining sugar from *gur* is therefore generally on the decline.

Only 10 factories were refining *gur* in 1939, 5 being pure refineries and 5 being cane sugar factories refining *gur*. Of those six were in Madras, two in U. P., one in Bihar and one in the Travancore State. Of the total production of 14200 tons in 1939, Madras alone accounted for over 8000 tons. The year 1933 was a peak year of the production of sugar from *gur*, the production being about 80,000 tons. Since 1934, *gur* refineries have begun to prove unprofitable and there has been a decline in the production of sugar refined from *gur* generally as will be seen from the following table, which also shows the recovery of sugar and of molasses per 100 tons of cane, from 1935 to 1940.

TABLE NO. 6
Production of Sugar and Molasses in India by Gur-Refineries.

Particulars	1935	1936	1937	1938	1939	1940
Number of Gur refineries operating ...	13	13	9	10	10	(Est) 10
Gur melted tons ...	67,613	87,472	32,000	26,700	23,300	55,100
Sugar manufactured tons ...	39,103	50,167	19,500	16,600	14,200	31,700
Molasses obtained tons ...	21,935	32,556	10,100	8,800	6,400	16,900
Recovery of sugar per 100 tons Gur ...	57.83	57.23	60.94	62.17	60.94	57.53
Recovery of Molasses per ...	32.44	37.21	31.56	32.95	27.46	30.67

The inferior quality of *gur*, the fairly high price of *gur* and the higher manufacturing cost of refining sugar are responsible for the decline in the output of sugar during 1939.

In the year 1940 the estimated production of sugar from *gur* is about 31,700 tons.

Total production and Import of Sugar in India in 1939-40

We may now turn to the statistics of production and import of sugar from all sources. Table no 7 gives the *total* production of sugar in India, of imports of sugar into British India and in Kathiawar Ports and of the estimates of production, imports etc. for the next season, i.e., 1940-41.

For facilitating reference we are giving since the publication of the 1938 Annual, the figures of net imports of sugar from November-October as in the case of the figures of production of sugar in India. We regret however to state since 1939-40 such figures of imports are not net (i.e., excluding re-exports), and that publication of figures of imports in Kathiawar Ports has been discontinued by the Government of India for some time past.

Importance of Sugar industry in the National Economy.

The above figures of production will show the importance of this industry at the present time. In this connection it is of interest to note that this Industry is at present the *second largest* industry in India, the Cotton Textile Industry being the largest, and is owned managed and controlled by the nationals of the country. It is also important to remember that the prosperity of about 20 million agriculturists is bound up with the fortunes of the sugar industry. Taking into consideration these facts and also that the development of the Industry has enabled the country to stop the huge annual drain of about Rs. 16 crores to foreign countries, by producing the requisite quantity of sugar within the country itself with such rapidity, and the possibility of production of sugar from the existing equipment of factories in quantities larger than the present estimated consumption, *it is essential to create conditions for a stoppage of all imports of sugar into the country, and of expansion of markets within the country and outside the country to as large an extent as possible.*

TABLE NO. 7

Number of Cane factories working in India, including States, and Production of Sugar from Cane Factories, Gur Refineries, Khandsari; Net Import of Sugar in British India and Import in Kathiawar Ports during the last 9 years, and estimates for 1940-41 and 1941-42.

Year (November October)	No. of cane factories working in India	Cane Factory Production (November- October)	Sugar Refined from Gur (January- December)*	Khandsari (Con- jectural estimates) (Nov.-Oct.)	Total Production of sugar in India (Nov.-Oct.)	Net Import (Excluding Re- exports) of Sugar in British-India (Nov.-Oct.)	Import of Sugar in Kathiawar Ports (Nov.-Oct.)
		(Tons)	(Tons)	(Tons)	(Tons)	(Tons)	(Tons)
1931-32	32	158,581	69,539	250,000	478,120	438,797	92,678
1932-33	57	290,177	80,106	275,000	645,383	321,081	68,649
1933-34	112	453,965	61,094	200,000	715,059	233,366	87,094
1934-35	130	578,115	39,103	150,000	767,218	197,775	113,364
1935-36	137	932,100	50,067	125,000	1,107,167	86,962	45,218
1936-37†	137	1,111,400	19,500	100,000	1,230,900	11,960 †	12,870
1937-38	136	930,700	16,600	125,000	1,072,300	9,410	12,284
1938-39*	139	650,800	14,200	100,000	7,65,000	254,400	76,819
1939-40**	145	1,241,700	31,700	100,000	1,373,400	35,260 *** (11 Months)	28,854 (5 Months) ††
1940-41	147	975,000	50,000	125,000	1,150,000	5,000	..
1941-42	150	850,000	25,000	100,000	975,000	(Our estimates)	...

Consumption of Sugar.

The present annual consumption of sugar is roughly estimated by us to be about 10 lakhs tons per year (our *per capita* consumption is very small as compared with most of the other countries of the world, as a glance at Table no 6 in the "Sugar Industry at a Glance" will show). This consumption, however, is not steady and varies from year to year with the rise and fall in the price of sugar, with the changes in the economic condition of the people in the country and with the growth of the population. (For detailed information regarding price level and consumption of Sugar in India,

*Figures of *gur* production for calendar year 1932 are added to figures for 1931-32, and so on.

**Our estimates.

†Factories in Burma, and production of sugar in Burma, are excluded from 1936-37 season.

‡Imports in Burma excluded from April, 1937 onwards.

***Figures of gross Imports (not net) only available since 1939-40, as several statistics are discontinued.

††Statistics discontinued from March, 1940.

TABLE NO. 8
Sources of supply of Sugar required for Consumption in India.
(November-October) from 1931-32 to 1939-40.

PARTICULARS	1931/32	1932/33	1932/34	1934/35	1935/36	1936/37†	1937/38	1938/39	1939/40
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Initial Stock :									
(1) In Ports	31,510	19,176	9,057	21,630	11,189	23,684	22,000	(our Est) 20,000	(our Est) 51,000
(2) In principal Land markets	8,366	7,994	5,330	15,000	15,000	...
(3) With factories	4,000	130,300	170,000	67,000	25,000
Production of Sugar :									
(a) Direct from cane	158,581	290,177	453,965	578,115	932,100	1,111,400	930,700	650,800	1,241,700
(b) Refined from Gur	61,990	77,995	64,890	43,500	47,876	25,600	17,200	12,200	14,200
(b) Khandasari	250,000	275,000	290,000	150,000	125,000	100,000	125,000	100,000	1,00,000
Imports of Sugar by Sea	443,200	324,400	245,300	200,100	93,800	16,001	8,986	254,400	36,000
Imports of Sugar by Sea into Kathiawar Ports	93,000	64,000	87,004	113,400	45,500	12,870	12,238	90,600	28,000
TOTAL SUPPLY	1,038,281	1,050,748	1,080,306	1,115,111	1,263,159	1,424,865	1,301,124	1,209,200	1,495,990
Re-Export of sugar by Sea	4,414	587	11,900	2,157	6,206	5,533	131	2,000	...
Export of sugar by Sea	382	3,356	434	357	449	10,640	8,668	7,000	...
Export of sugar by Land	32,000	31,957	30,607	29,939	27,667	35,064	31,100	30,000	70,000
(Estimated)									
Closing Stock :									
(1) in ports	19,176	9,057	21,630	11,189	23,684	22,000	20,000	51,000	12,800
(2) in principal inland markets	7,994	5,330	15,000	15,000	25,000	24,000
(3) with factories	4,000	130,000	170,000	67,100	...	400,000
Total to be deducted	55,972	44,957	64,571	51,636	193,336	258,237	141,899	144,000	5,06,800
Quantity consumed to the nearest thousand	992,000	1,006,000	996,000	1,059,000	1,074,000	1,167,000	1,159,000	1,068,000	9,88,000
								(Our Estimate)	(Our Est)

* Vide The Review of the Sugar Trade of India, for the year 1938-39, published with the Indian Trade Journal, dated 30th May, 1940. For statistics of production, imports etc. for 1939-40 see previous tables.

† Burma has been excluded since 1936-37.

vide Mr. M. P. Gandhi's "Indian Sugar Industry—Its past, present and future, 1934, pp.382). But we would not be far out, if we estimate the annual consumption of sugar in India in 1938-39 at about 10½ lakhs of tons, and in 1939-40 to about 9¾ lakhs of tons owing to the shortage of sugar, abnormal rise in the price of sugar (leading to temporary starvation of markets during periods) as compared with the previous year. According to the Director of the Imperial Institute of Sugar Technology, the consumption of sugar from the 1st November 1938 to 31st October 1939 was 1,083,000 tons as against 1,159,000 tons during the preceding crop year.

Table no 8 on page 175 gives details regarding sources of supply of sugar required for consumption in India during the last 9 years, i.e., from 1931-32 to 1939-40. The figures for 1939-40 are our own estimates.

A glance at the figures of production will show that during the year 1935-36 the internal production of sugar from all sources exceeded the estimated consumption in 1935-36 by about 33,000 tons and in the years 1936-37 by about 63,000 tons. During the year 1937-38 the total internal production was smaller by about 87,000 tons while in 1938-39 the production was exceedingly short, the shortage being about 3 lakhs tons. In 1939-40 the production has been abnormally large and will exceed the estimated consumption by about 4,00,000 tons. As a consequence of the overproduction in 1939-40, the imports have been negligible and we hope and trust that it will not be necessary for India to import any more sugar in any year for meeting her requirements owing to shortage of production for any reason. We have already remarked that the potential capacity of our factories is large enough to supply not only the quantity required for internal consumption, estimated as at present, but indeed about 4 lakhs tons more per year.

*Volume of imports and revenue from Import Duty on
Sugar during the last 20 years.*

It would be of interest to compare the value of foreign sugar imported into British India during the last 20 years along with the figures of the revenue derived from the import duty, and the rate of import duty. We are giving the Table in the Sugar Industry at a glance.

A glance at the table will show our decreasing dependence on foreign countries for the supply of sugar and the decreasing amount of money sent out of the country for payments of the imports of sugar.

except during one or two exceptional years due to the bad cane crop in India.

*The present Protection of the Industry to continue
31st March, 1941.*

We regret that although the Government of India announced their decision in October, 1940, not to hold a fresh Tariff Board Enquiry for determining the extent of protection to be conferred on the sugar industry during the remaining period of 5 years ending on 31st March, 1946, they have not yet thought fit to announce the quantum of protection and to remove the suspense of the industry. We trust that they will do so at an early date. In this connection we are gratified to note that the Government of India have accepted our recommendation made in the 1939 Annual in regard to the futility of a Tariff Board enquiry during the period of the War.

Effect of protection on consumers.

In our 1938 Annual we have discussed at considerable length the result of the policy of discriminating protection adopted by the Government and stated our conclusion that the policy of liberal protection to sugar has been a pronounced success and has been responsible for the rapid development of the industry which has made the country entirely self-sufficient in the matter of supplies of sugar. The Tariff Board also came to the conclusion that the "ordinary consumer, has, so far, no cause of complaint against the policy of protection and indeed has every reason to be satisfied". The Tariff Board also observed on page 125 of their Report that, 'even if in consequence of a rise in the cost of manufacture due to an increase in the cost of raw material the selling price of sugar is raised, it seems impossible that the consumer will have to pay more than he had before the advent of protection'. In view of the very abnormal circumstances prevailing during 1939-40 there has been a remarkable rise in the price of sugar consequent on the policy adopted by the Governments of U. P. and Bihar of fixing high minimum prices of cane to which a detailed reference has been made elsewhere, and the consumer, it must be admitted, has had to pay abnormally high price of sugar, but it must be stated that this has not been due to any profiteering by the manufacturers whose profits were indeed reduced, (except in the provinces outside Bihar and U.P.) but due to the high price paid to the cane-growers who have considerably benefited, although such benefit must needs be temporary and cannot continue for long due to the overproduction of cane which it would

necessarily bring about and due to the increasing competition from provinces other than U.P. and Bihar which would lead to the necessity of a reduction in cane prices for the sake of the maintenance of the industry in U. P. and Bihar. We strongly urge that measures should be taken which would lead to the reduction in the price of sugar to about Rs. 7|8|- per maund in the interest of the consumers as also of the majority of factories in U. P. and Bihar which would be hard hit and indeed, even in the interest of the millions of cultivators in U. P. and Bihar who would also be adversely affected if the total production of sugar in U. P. and Bihar had to be curtailed due to increasing production in other parts of the country.

Protection to the advantage of the country.

We feel after a careful appraisal of various relevant factors, e.g., the magnificent progress of the industry, the almost complete independence we have achieved, the improvement in the condition of the millions of cultivators as a result of better returns from the cultivation of the cane crop, the relief afforded by the development of this industry in the severe problem of unemployment, particularly amongst the educated and technical men, the subsidiary industries which are about to spring up, the scope for profitable development which was afforded to indigenous dormant capital during a period of acute world depression, the development witnessed in the village industry of manufacture of *gur*, which is a very nutritive and unique article of direct consumption by millions of our people, as can be seen from the progressive increase in the production of *gur*, and the confidence established about India's ability in the development of industrial enterprises if suitable opportunities are created, any frank and unbiassed person cannot help arriving at the conclusion that the development of the Indian Sugar Industry has completely vindicated the policy of protection (adopted by the Government of India for the last decade or so) which has genuinely revolutionised the industry and has indeed proved a blessing to the country.

Legislative Enactments

Imposition of Excise duty from 1934 pertaining to Sugar.

On 1st April, 1934, the Government of India imposed an Excise Duty of Rs. 1-5-0 per cwt. (roughly equivalent to about 0-15-4 per md.) on factory sugar produced in British India by the vacuum pan process (modern system) and 0-10-0 on sugar produced by the open pan process (indigenous or Khandsari system) in spite of unanimous and

strong protests from all quarters. No duty was imposed on Palmyra Sugar (*i.e.*, sugar manufactured from Jaggery obtained by boiling the juice of the Palmyra palm produced largely in Madras) owing to the conviction of the Government that the Industry would be severely hit as a result of the imposition of the duty.

*Increase in Excise Duty from 1937.**

On the 28th February, 1937, the Government of India increased the excise duty on factory sugar to Rs. 2 per cwt. (roughly equivalent to Rs. 1-7-6 per maund) and to Re. 1 per cwt. on Khandsari sugar. There was considerable opposition to this move of the Government of India and after very heated debates (on the floor of the Indian Legislative Assembly and the Council of State) in March 1937, the Finance Bill incorporating the Government's proposal for an increase of the excise duty on sugar was thrown out in the Assembly. Notwithstanding this, the Finance Bill was later certified by the Governor-General-in-Council and passed into an Act in utter disregard of and direct opposition to the wishes of the Indian Legislative Assembly for the sake of increasing the revenues from the manufacture of sugar on the ground that the development of the industry was responsible for drying up of the Government's revenue from import duty, forgetting or ignoring that this was a foregone conclusion, if protection to the industry was successful, *the only fault of the industrialists being that they developed the industry far more rapidly than was imagined by the Government.* Far from their being complimented on this remarkable achievement and far from their action being appreciated, **they** were penalised as it were, by subjecting this industry to such a heavy taxation (the increase in duty being more than 50 per cent.).

Sugar Cane Act, 1934.

On 1st May, 1934 the Sugarcane Act† also received the assent of the Governor-General. The Sugarcane Act was intended to secure

*The Indian States were also invited to impose an equivalent excise duty but there appears to be no compulsion, and these States can directly or indirectly give aid and encouragement to the development of the industry in their areas, by giving various facilities to factories to which the Government of India can take no objection *e.g.*, loans without interest, provision of free godowns, imposition of import duty on Sugar entering their territory, immunity from factories Act from income-tax, and other taxes etc., particularly as the levy of such a heavy excise-duty also helps the finances of these States.

*The Sugar (Excise Duty) Act, 1934, as amended upto 1940 will be found printed along with "*The Sugar Industry at a Glance.*"

†Not printed. Act repealed in U. P. and Bihar, in 1938. Rules issued under this Act are superseded by Rules made under provisions of the Sugar Factories Control Act, in U. P. and Bihar in 1938.

to the growers of sugarcane a fair price for their produce, to regulate the price at which sugarcane intended to be used in the manufacture of sugar may be purchased by or for factories, etc. It provides that a local Government may declare any specified area to be a "controlled area" and that it may prohibit the purchases in such area of sugarcane intended for use in any factory otherwise than from the grower of the sugarcane or from a licensed purchasing agent. It also empowers the Local Government (subject to the control of the Governor-General-in-Council) to fix by notification in the local Official Gazette a minimum price or minimum prices for the purchases in any controlled area of sugarcane intended for use in factory.

Sugar Industry (Protection) Act, 1939.

The Sugar Industry Protection Act, 1939, was passed continuing protection to the Industry at a reduced rate of Rs. 8-12 per cwt. from 1st April, 1939 up to 31st March, 1941. (For the text of the Act *Vide* "Sugar Industry at a Glance").

Change in excise duty on Khandsari Sugar.

With effect from 28th February, 1939, the excise duty on Khandsari sugar was decreased to 8 annas per cwt. by an amendment made under clause 3 (b) of the Indian Finance Act, 1939.

Further increase in Excise Duty, in 1940.

With effect from 1st March, 1940, the excise duty on factory sugar was increased to Rs. 3/- per cwt. (roughly equivalent to Rs. 2-3-3 per maund). The excise duty on Khandsari sugar was kept at the same level, namely -|8|- per cwt.

These amendments were carried out under Clause 3(b) of the Indian Finance Act, 1940.

Notification for Prohibition of Export of Sugar.

As a result of the ratification of the International Sugar Agreement, the Government of India prohibited the export of sugar from India by sea, except to Burma, for a period of five years ending in May, 1942. (*Vide* the "Sugar Industry at a Glance").

During the year 1940, however, as a result of the pressure brought by the industry, owing to over-production of sugar in the country, advocating the necessity of finding an outlet for sugar outside India, the Government of India were able to obtain an exemption from the obligations under the International Sugar Agreement to some extent and permission was made available for export upto 2 lakhs of tons

of sugar to the United Kingdom before 31st December, 1940, but, unfortunately, for the industry this concession could not be availed of due, partly, to the very low price at which sugar was proposed to be purchased by His Majesty's Government in U. K., and partly to the difficulties in availability of steamers for carrying the sugar to U. K.

U. P. and Bihar Sugar Control Acts.

The Sugar Factories Control Act was passed by the U. P. and Bihar Governments, and brought into effect by February, 1938. In 1939, the U. P. Sugar Factories Control Amendment Act was passed for making certain amendments in the Control Act of 1938. Rules under these Acts were published by Bihar and U. P. during the latter part of 1938 and certain amendments were made in the year 1939. (*vide* "Sugar Industry at a Glance").

In the year 1940-41 the Sugar Factories Control Act was amended both in U. P. and Bihar by the Sugar Factories Control Amendment Act, 1940, and the life of the Act was extended to 30th June, 1944, as a result of which a larger measure of control was assumed by the Governments over the industry. During January, 1941, a further amendment was made in the Act both in U. P. and Bihar by the United Provinces Sugar Factories Control (Amendment) Act, 1941. (For the text of the Act as amended up to January, 1941, *vide* "Sugar Industry at a Glance").

The U. P. Power Alcohol Act, 1939.

In 1939, the United Provinces Legislatures passed the U. P. Power Alcohol Act providing for the fostering, development and regulation of the industry of Power Alcohol. In August, 1940, His Excellency the Governor of U. P. gave his assent to the Act. In August, 1940 the draft rules which the Government of U. P. proposed to make were also published.

On the 10th November, 1940, the U. P. Power Alcohol (Amendment) Act, 1940, was promulgated. The Act provides for the compulsory admixture of Power Alcohol with petrol in certain specific proportions for use as motor fuel. The Government of U. P. have exempted all military requirements from the operation of this Act and have taken power to enforce the Act in any part of the Province and to enforce it piecemeal.

It is understood that His Excellency the Governor of Bihar will also promulgate a Power Alcohol Act on the lines of the Act in the United Provinces before long.

Cane price fixation in other Provinces and States.*

During 1939-40 the Government of Madras fixed a minimum price of cane at about Rs. 12-0-0 per ton, in the Hospet area. In no other area in Madras was a minimum cane price fixed. The Mysore Government have been fixing a minimum price of cane purchased by the Sugar Factory at Mandya since 1936 under the Sugar Industries safeguarding Regulation.

Although the price agreed to be paid for sugarcane in 1939 in Mysore was Rs. 9|8|- per ton for the first season and Rs. 10|8|- for the second season, the Government of Mysore fixed a minimum price at Rs. 12|- per ton on all cane supplied from February, 1940 up to the end of May, 1940. About the 18th July, when the Indian Sugar Syndicate suddenly reduced the price of sugar by Rs. 2|8|- the Government of Mysore reduced the minimum price of sugar to Rs. 11|- per ton from August, 1940 and this was further reduced to Rs. 10|- per ton from October, 1940.

The Governments of Bengal, Bombay and the Punjab have not fixed any minimum price of cane till now.

In January, 1941, the Sugar Industry Sub-Committee of the Bengal Industrial Survey Committee, which was asked by the Government of Bengal to enquire into the question of the fixation of minimum cane price for Bengal came to the conclusion that at present there was no case for fixing a minimum price for the crop of 1940-41. The question of fixing a minimum price for future years' crops has been kept open for further investigation by the Sub-Committee.

Cess on cane of 0-0-6 per maund in U. P. and Bihar from 1939-40.

The Governments of U. P. and Bihar levied a cess with effect from the commencement of the 1939-40 season of 6 pies per maund on all sugar cane purchased by factories in addition to the cane prices. The revenue derived from the cane cess in U. P. in the financial year 1938-39 was Rs. 27,81,280|- and in 1939-40 Rs. 40,04,350|-. The revenue derived from the cess in Bihar was Rs. 14,34,000 in 1938-39 and Rs. 17,86,000 in 1939-40. The cess was imposed under Section 29 of the Sugar Factories Control Act of U. P. and Bihar. The object of the imposition of the cess was development of cane cultivation. The revenue from this source not having been properly assigned no details are available of exactly how it was spent, but large sums are spent annually on sugar cane and its development and also on roads more particularly in the vicinity of factories.

*Cane-price fixation in U. P. and Bihar is dealt with separately elsewhere.

Cane Cess reduced to 0-0-3 per maund in 1940-41.

The cess continued at the same rate of 0-0-6 per maund in 1939-40. During 1940-41 the cess has been reduced to 0-0-3 per maund in view of the special circumstances created by the necessity of levying a special cess for compensating the Governments of U. P. and Bihar for the temporary exemption from the payment of rebate given to factories in U. P. and Bihar on the unsold stocks of sugar from the 25th August, 1940.

U. P. and Bihar Sugar Control Board.

The Sugar Control Board of U. P. and Bihar continued to function during the year and had several meetings at Lucknow and Ranchi. The term of appointment of the inter-provincial Sugar Control Board of U. P. and Bihar having expired in June, 1940, a new Board for the two Provinces was appointed on 1st July, 1940, for a period of one year. In place of the Minister who used to be the ex-officio Chairman of the Board, under the new constitution the Adviser to His Excellency the Governor in U. P., and in Bihar will be the ex-officio Chairman of the Board, in each Province.

The personnel of the re-constituted Sugar Control Board is given in the "Sugar Industry at a Glance," on page 10.

History of Fixation of minimum cane prices in U. P. and Bihar.

The position in respect of the fixation of a minimum cane price and the changes in the method of fixation of cane prices since 1934-35 have been given in a table in the "Sugar Industry at a Glance", and was discussed in detail in the previous Annuals. Briefly the position was as follows :—

From 1934-35 up to 1936-37 cane prices both in U. P. and Bihar were fixed for every fortnight varying with the price of sugar realised by the factories. The scales of the schedules were however different from the scale adopted in the year 1939-40. During 1937-38, the minimum price for cane was not fixed every fortnight varying with the price of sugar. The minimum cane price schedule which was in force till 1936-37 having been abolished in the beginning of 1937-38 an irreducible minimum price of sugar cane was fixed for the entire season of 1937-38 at annas 0-5-3 per maund for gate-cane and annas 0-5-0 per maund for rail-borne cane. In 1938-39 the minimum price of cane of cane for vacuum pan factories for the whole crushing season both in U. P. and Bihar was fixed at 0-6-9 per maund for gate-cane, but in the middle of January 1939 the minimum prices were increased

due to a rise in the price of sugar by one anna in Bihar, and 2 annas in U. P. in certain areas. In 1939-40 on the recommendations of a Sub-Committee of the U. P. and Bihar Sugar Control Board a fresh sliding scale of minimum price linked with the price of sugar was adopted. The *communiqué* issued by the U. P. and Bihar Governments making a slight modification in the scale recommended by the Sub-Committee and announcing the scale decided upon by them was announced on the 27th October 1939 and in accordance therewith the initial minimum price for sugar cane was fixed at 0-8-9 from the 1st November 1939 both in U. P. and Bihar. These prices were increased further during the season up to the extent of 0-10-9 in U. P. and 0-10-6 per maund in Bihar, in January, 1941. A reference to this has been made elsewhere.

Later in the season finding that there was an over-production of sugar and that the factories were unwilling to crush more cane unless the price of cane was reduced appreciably, the Governments of U. P. and Bihar lowered the minimum price of cane from 11th April 1940, *abandoning the practice of fixing a minimum price with reference to the sliding scale schedule*, and fixed the price of cane at a flat rate of 0-6-3 with a provision for payment of a higher price of cane to the cultivators if the factories were able to sell sugar at a high rate, thus introducing virtually the system of a deferred payment for cane.

Flat minimum rate of cane in 1940-41.

During the 1940-41 season the Governments of U. P. and Bihar fixed a flat minimum rate for cane of 0-4-3 per maund for the entire season and abandoned the schedule, as the schedule was not found to be workable. They also removed the difference in price of 0-0-3 per maund, between gate-cane and rail-cane. There was very strong criticism of the method of fixing cane prices adopted by the Governments of U. P. and Bihar at the All India Conference held at Simla in June 1940, and the prevailing opinion at the conference was that the sliding scale of linking cane prices to sugar prices, which was in operation in the Provinces of U. P. and Bihar should be given the go-bye, and that a minimum price on the basis of the figures arrived at by the Tariff Board should be fixed for the season as a whole. Dr. Gregory, Economic Adviser to the Government of India, also expressed the view at the Conference that the minimum prices had hitherto been fixed on the basis of the *past price of sugar and not on the basis of the prices which it was the endeavour to create for the future.*

The cane cess was reduced to 0-0-3 per maund, in U. P. and Bihar, during 1940-41, but an additional cess was levied.

The schedule of cane prices as adopted in the season 1939-40 has been given in the "Sugar Industry at a Glance", along with the fortnightly cane-prices.

During the 1939-40 season there was considerable criticism from the industry in regard to the inequitable nature of the cane price schedule which left the manufacturers very little profits. We are happy to note that the Governments of U. P. and Bihar give up the use of this schedule towards the end of the season, and also for the entire season of 1940-41 and instead fixed a flat minimum price, with a provision for a further *deferred payment for cane* to the cultivators in the event of a higher price of sugar being realised than was contemplated when the cane prices were fixed.

In this connection, the remarks made by Mr. J. Aitken at the 8th Annual General Meeting of the Indian Sugar Mills Association held on 14th September 1940, will be apposite*. Mr. Aitken has advocated the adoption of a scheme of deferred payment keeping the basic payment low. We feel that the interests of the industry will be served

*At the 8th Annual General Meeting of the Indian Sugar Mills Association held on 14th and 15th September 1940, the Chairman, Mr. J. Aitken said as follows:—

"The control of cane production in each factory's economic area of supply is, I consider, a matter crying out for immediate attention and one which seems to be a natural corollary of the suggestion that before each planting season commences each factory should be instructed as to the quantity of cane which it will require to arrange for the following crushing season. With this in view, and despite opinions to the contrary held by some of our members, and, if my memory serves me correctly, also expressed by the outgoing Committee, I am in favour of the licensing of growers, or at least some sensible method of bonding cane in reserved areas prior to planting. I admit the difficulties attached to this proposal but I consider they can, and should, be surmounted. And now for cane prices, I am afraid that neither the Central Government, Provincial Governments or Indian States will be prepared to fix a minimum price providing, say, even a 20 per cent margin of profit to the grower and thereafter leave the matter to the factories. It would appear, therefore, that it may be desirable to adopt a scheme of deferred payments, and, if so, I would insist that the basic payments should, after providing for a small margin of profit, be kept as low as possible consistent with the need for obtaining adequate supplies of cane in factories' reserved or economic supply areas notwithstanding competition from other crops. There may be administrative difficulties connected with deferred payments, but here again I consider that these should be overcome."

better if the policy of fixing minimum prices of cane varying from fortnight to fortnight were given up and a flat rate of minimum price of cane fixed for the entire season, giving a fair return to the cultivators. We have already emphasised the necessity of keeping the price of cane as low as possible bearing in mind the interests of the cultivators of cane in U. P. and Bihar, for there is no doubt that if an endeavour is made to keep a high price of cane, the production of sugar in parts outside U. P. and Bihar will continue to grow and to that extent the consumption of cane in U. P. and Bihar will be decreased to the detriment of the cultivators, assuming that the consumption of sugar remains at the present level. There is a good possibility of increasing the consumption of sugar if the price of sugar is reduced and this can be done only if the prices of the raw material, which accounts for about 60 per cent of the cost of production, is appreciably reduced.

Effects of Excise duty.

We have discussed a great length in the 1938 and 1939 Annuals the effects of excise duty on the Indian Sugar Industry.

We have also referred to the observations of the Indian Tariff Board (vide page 16 to the Report) therein. There appears little practical point to us in laying any stress on the necessity of reduction in the excise duty, bearing in mind the views of the Government† of India on the question of raising larger amounts of money by imposition of revenue duties. In spite of the existence of a high excise duty of Rs. 2|- per cwt. on factory sugar, the Government of India thought it proper to increase the excise duty to Rs. 3|- per cwt. with effect from 1st March, 1940 and this has had a very adverse effect on the industry. This reduced the profit of the manufacturers* and made it difficult to decrease the price of sugar in the interest of the consumers. We feel, however, that the present duty of Rs. 3|- is inordinately high and we very strongly recommend to the Government of India the desirability of reducing it in the interest of all concerned.

†Vide the speeches of the Hon'ble Finance Member in the Central legislature in March, 1940, when he stated that sugar was a suitable commodity for bearing taxation, as in most Countries.

*As the manufacturers in U. P. and Bihar were unable to bear this extra duty, the U. P. and Bihar Government had to arrange to postpone the collection of this increased duty from the factories, and to borrow money from the Government of India for paying this duty to them, and to collect the amount from the factories in future years, by a special cess on sugar-cane, levied with effect from the 1940-41 season.

Capital and Dividend Statement of Sugar Factories.

During the year 1938-39 a very large number of factories in U. P. and Bihar worked either with losses or with reduced profits. In the table below we are giving Capital and net block of a few Sugar Companies and dividends since 1932.

TABLE NO. 9

Capital and Net Block of Sugar Companies and Dividends since 1932.

Name of Sugar Factory	Paid-up Capital with De- bentures*	Net Block	DIVIDEND							
			1934	1935	1936	1937	1938	1939	1940	
	Rs.	Rs.								
Balarampur	28,00,000	25,80,251	10	10	10	3½	2½	Nil	Nil	
Basti	12,00,000	22,48,002	25	15	25	15	15	12	..	
*Belsund	20,49,950	16,19,133	Nil	Nil	Nil	Nil	Nil	Nil	...	
Belapur	37,59,800	31,92,717	24	24	16	14	14	20	20	
*Bharat	6,29,700	6,53,244	..	Nil	7½	10	5	5	...	
Buland	18,00,000	20,96,125	5	6	11½	11½	12½	
Carew	40,00,000	55,36,327	15	12½	12½	10	10	Nil	Nil	
*Cawnpore	25,00,000	31,13,650	30	25	10	5	5	2½	2½	
Champaran	14,62,000	22,01,942	5	0	20	5	5	7½	2½	
Deccan Sugar & Abkhari	23,50,000	7,02,302	30	35	20	10	10	10	...	
*East India Distilleries & Sugar Factories ...	£321,881	£268,582	7½	10	10	5	10	15	...	
*Mysore	20,79,280	33,37,652	10	11½	15	10	15	15	20	
Nawabganj	18,24,280	22,18,343	11	
New Savan Sugar ...	11,00,000	9,44,476	10	Nil	10	Nil	Nil	Nil	Nil	
New India	8,12,700	14,40,015	Nil	Nil	...	
Punjab	9,74,000	18,32,645	40	15	20	15	15	6	...	
Purnea	18,00,000	11,13,939	Nil	Nil	Nil	Nil	Nil	Nil	...	
Purtabpore	15,00,000	17,54,179	7½	Nil	7½	Nil	Nil	Nil	...	
Raza	15,00,000	19,38,944	5	6	10	7½	12½	12½	12½	
*Ryam	7,75,000	7,01,633	15	15	10	Nil	Nil	Nil	Nil	
*Famastipur	15,99,000	12,61,159	Nil	Nil	Nil	Nil	Nil	Nil	Nil	
*Shree Sitaram	10,95,462	12,11,923	..	6½	Nil	10	10	
*Sitalpur	13,01,510	14,51,958	6	Nil	8	Nil	2½	2½	...	
*South Bihar	12,50,000	20,20,224	10	12½	15	15	25	
*Upper Ganges	11,99,950	12,57,674	Nil	Nil	5	7½	7½	10	...	

*Only those marked with asterisks include Debentures.

A perusal of the above table will show clearly that the margin of profits has been greatly reduced and that it has not been possible for a large number of factories to make a profit of even 10 per cent since the last two seasons. After considering the question of the rate of profit to be allowed to factories the Tariff Board made the following observation:—

“Taking all points into consideration, we do not think that an allowance of 10 per cent. profit on the fair selling price is excessive” (Vide, page 80 of the Tariff Board).

In a normal year, a factory may be able to realise 10 per cent, but in unfavourable years, like 1939-40, the profit will be less, if there is any profit at all, or even there may be a loss.

Tariff Board's Estimate of Cost of Production of Sugar in India.

According to the Tariff Board, the manufacturing charges for a representative factory in India in a normal season are Rs. 1-12 per maund while the overheads are Rs. 1-8-0 per maund. Along with the cost of raw material, which they have computed at Rs. 3-9-9 per maund on the basis of cane at 0-5-6 per maund and recovery of one maund from 10½ maunds of cane, the total cost of production of sugar comes to Rs. 6-13-10.

The cost of raw material thus works out to	..	52.8%
Manufacturing charges	25.49%
Overhead charges	21.93%

Total Consumption of Sugar including Gur (Raw Sugar) in India.

Before we deal with the various problems facing the sugar industry and the progress made in respect of them during the last season, we will refer to one more question, i.e., the total consumption of sugar including *gur* in India. In the previous pages, we have referred to the question of consumption of factory sugar, and Khandsari sugar but not of “all sugar” in India. Apart from this quantity (estimated by us at about 10½ lakhs tons during 1938-39 and 9¼ lakhs tons only during 1939-40) of refined sugar, India consumes a very large quantity of *gur*. The total annual production of *gur*, all of which is consumed in the country, is now about 28 lakhs of tons. Figures of net production of *gur* from 1927-28 to 1938-39 are given in the Table on the next page.

TABLE NO. 10

Calculated Net Production of Gur in India for direct consumption,
from 1927-28 to 1939-40.*

Year (November-October)	Calculated net Annual Production of Gur of direct consumption in Tons			
1927-28	2,279,000
1928-29	1,787,000
1929-30	1,842,000
1930-31	2,241,000
1931-32	2,758,000
1932-33	3,240,000
1933-34	3,486,000
1934-35	3,701,000
1935-36	4,101,000
1936-37	4,268,000
1937-38	3,364,000
1938-39	2,131,000
1939-40 (Our Estimate)		28,00,000

Calculated Net Production of Gur in India for direct consumption
from 1927-28 to 1939-40.*

It must be remembered that the population of India is largely rural, over 70 per cent. of the people living in villages, and *gur* has been used not only as a sweetening agent, but principally as an article of diet in the villages for several generations. *Gur* is also used on ceremonial and auspicious occasions by the people not only in villages but even in towns. It has a nice flavour, delicious taste, and is a very nutritive and unique article of diet by millions in India.

What is Gur or Jaggery?

Gur or Jaggery could be well defined as cane juice boiled to a temperature of 115°C., containing from 50 to 85 per cent. of sucrose,

*The net production of *gur* is calculated from the total yield of *gur* as published in the "Final general Memorandum of the production of the Principal Crops in India" by the Director General of Commercial Intelligence and Statistics, allowing for the *gur* equivalent to cane used for purposes other than *gur* manufacture. *Vide* Indian Trade Journal, 30th May 1940.

10 to 20 per cent. of inverted sugar, and a smaller percentage of mineral salts, ash and moisture. Most nearly, it may be described as hardboiled massecuite. This is the form in which about 3½ million tons of *gur* is annually consumed by our people in this country. In colour, purity, hardness, flavour and shape in which it is marketed, *gur* varies greatly from tract to tract but with relatively unimportant exceptions. Most of the *gur* production is consumed directly, only a negligible proportion being used for conversion into sugar in refineries. Thus *gur* is not a raw material for refining sugar but a final product for domestic consumption. *Gur* is manufactured in most sugar cane growing villages by the simplest of process. Modern 2-roller, 3-roller and 5-roller mills driven by oil engines have replaced the earlier pestle-and-mortar type of mills made of stone or wood. Appreciable improvements have also been made in the furnaces and pans, but in essentials, the process is much the same as it was a hundred years ago, the fresh cane juice being boiled down to a solidifying point in an open pan. A certain amount of clarification takes place during this process and multiple pans are common in some tracts where high-class *gur* is made. Ordinarily one or two pans are used for boiling but some times as many as 12 are arranged in a boiling series.

It is difficult to state with precision the cost of manufacture of *gur* as it varies from year to year and from district to district, but roughly it may be taken as Rs. 1|1|- per md. for the U. P. and the Punjab (vide Tariff Board Report page 51). Taking -4|- as the then cost of cane, the Tariff Board stated the cost of production of 1 md. of *gur* would be Rs. 1-3-9.

It is also difficult to arrive at a correct figure of the average price of *gur*, because, it differs considerably according to the quality and varies from district to district and from town to town and from month to month. The average price of *gur* per maund varied from Rs. 5-5-9 to Rs. 2-9-0 during the years 1930-31 to 1939-40.

Gur Development Scheme in U. P.

In the Annual Report for 1939-40 the U. P. Government in reviewing the progress of the *gur* development scheme observed that it is evident that the cane-grower had gained immensely and that every rupee spent on the scheme has added much to his income. The improved types of mills alone that have been introduced in the year

are estimated to add Rs. 3 lakhs a year to the growers' income. The objects of the scheme of development of gur are to avoid wasteful processes of manufacture and increase the quantity as well as quality of gur by: (a) Replacement of local *kolhus* by improved ones to obtain better extraction; (b) introduction of improved types of furnaces to prevent waste of fuel and time to avoid inversion and charring; (c) popularisation of cheap and simple methods of juice clarification to improve the colour, taste and quality of the product, and (d) provision of marketing facilities to capitalise the results of improvements effected.

The scheme was introduced in 1937-38 in about 2000 villages and in 1938-39 the Government expected that it would be extended to 4500 villages.

Cost of manufacture of gur.

It is difficult to state with precision the cost of manufacture of gur as it varies from year to year and from district to district, but roughly it may be taken as Rs. 1½/- per md. for the U. P. and the Punjab (vide Tariff Board Report page 51). Taking 4/- as the present cost of cane, the Tariff Board stated the cost of production of 1 md. of gur would be Rs. 1-3-9.

It is also difficult to arrive at a correct figure of the average price of gur, because, it differs considerably according to the quality and varies from district to district and from town to town and from month to month. The average price of gur per maund varied from Rs. 5-5-9 to Rs. 2-9-0 during the years 1930-31 to 1937-38. Since 1934-35, the price of gur was generally on the decline till 1937-38 due perhaps to the production of larger quantities and to a certain extent to the decline in the price of sugar. The price of *gur*, and sugar rose during 1938-39, but it fell in 1940-41, due to apprehended overproduction.

Activity of gur making in Reserved Areas in U.P. not favoured.

In our last report we referred to the fact that sugar factories were concerned about the activities of the Gur Refining Department which carried on propaganda for the manufacture of gur in the reserved areas of factories in the U. P. The U. P. Cane Commissioner clarified the position by issuing a note on the 22nd September, 1939, stating that the Director of Industries had issued instructions to the District Gur Controlling Officers that the list of villages under the Gur Development

Scheme should be scrutinised so as to exclude the villages lying in the Cane Development Zones and permanently reserved areas of factories.

Gur-making in Bihar.

In regard to the Government of Bihar, who were requested to take similar action by the industry, the Government of Bihar observed that gur making industry in Bihar was not of much importance and they did not envisage any extensive development in that direction. They further felt that if such a programme of manufacture of gur were undertaken, it would certainly be concentrated in areas remote from reserved areas of factories.

Surplus Cane for Gur in U.P.

During the year 1940, the Government of U. P. apprehending a great surplus of cane took steps in order to convert the surplus cane into gur and carried on a wide-spread campaign to impress upon the districts where there was a real pucity of Kolhus. Special efforts were made to supply these on hire. The U. P. Government sanctioned a sum of Re. 1 lakh on account a Takavi for supply of improved types of Kolhu and pans on payment of hiring charges. The big farmers were also advised to instal power crushers and financial help was promised in deserving cases by the Cane Commissioner. The staff of the Gur Development Department was also augmented so as to enable co-operation between the cultivators and to ensure fullest use of all available Kolhus. Speaking at the investiture ceremony of the Gur Development Training Classes in U. P., Mr. Vishnu Sahai, the able Cane Commissioner of U. P. remarked that it would be a wise course for the cane-growers in the province of U. P. to possess gur manufacturing equipments for use in abnormal years till the recurrence of abnormal conditions was satisfactorily controlled.

Per Capita consumption of Sugar and Gur.

In Table No. 5, in the "Sugar Industry at a Glance", we have given statistics of the *per capita* consumption of sugar, as well as Gur, for the last 10 years. The importance of the gur manufacturing industry—although essentially a cottage industry—can be gauged from this table. It must be noted that the quantity of gur consumption in India is about $3\frac{1}{2}$ times that of refined sugar. While the *per capita* consumption of white sugar in India is low, we must not ignore the figures of consumption of gur when comparing the *per capita* consumption of sugar in India, with other countries of the world.

The production of *gur* in India in 1938-39 has been estimated at only about 21,31,000 tons as compared with 33,64,000 tons in 1937-38 and 42,68,000 in 1936-37. This is due to the paucity of cane supplies. The production of *gur* has thus shown a considerable decline during the last three years. We except the production of *gur* during 1940-41 to go up considerably as there is a great surplus of cane. We estimate the production of 1939-40 will be about 28,00,000 tons. The net production of *gur* in 1938-39 was the lowest of any year since 1930-31.

We have already seen before that about 56 per cent. of the cane crop in the country was consumed for *gur* manufacture in 1939-40 as compared with about 64 per cent. in 1938-39 and 62 per cent. in 1937-38.

Although the main subject of our survey here is the problem of refined sugar, we cannot ignore the fact that it represents about one-fourth only of the total consumption of sugar (*gur* as well as sugar) in India. There is no necessity, however, of making a detailed reference to the subject of *gur* manufacture as it does not constitute a problem due to its being a commodity for domestic consumption only, there being neither any import nor any export of *gur*. Thus *gur* has to face no competition from any foreign country.

Gur Manufacture—a Cottage Industry.

Although the quantity of *gur* produced in India is generally $3\frac{1}{2}$ times as big as the quantity of refined sugar at present, the method of production of this enormous quantity, it must be admitted, is very primitive. Its manufacture consists of two main process, viz. crushing of cane and subsequently boiling of the juice. It is essentially a cottage industry and is manufactured in small quantities. The extraction of the juice from cane is about 60 per cent. in the case of bullock driven mills and up to 70 per cent. in the case of power driven mills. The best quality of *gur* is produced in Coimbatore, Kolahpur, and Meerut. Such superior *gur* remains in good condition for about a year where the climate is a little dry but it deteriorates in humid atmosphere in about 3 months.

Statistics Re: Movement of Gur Scanty.

At the present moment, *gur* requires no elaborate form of marketing. No attempt has so far been made to estimate the quantity of *gur* consumed in the various Provinces of India. This is due to

the fact that information regarding the movement of *gur* is very scanty. Figures for imports and exports of *gur*, by rail and river from Provinces and States are not separately available, these being combined with those for molasses etc. Large quantities of *gur* are transported by road over long distance, and the error without allowing for this fact is likely to be considerable. Therefore, any estimate of the quantity for consumption of *gur* in the various provinces would be difficult. For these reasons, such figures have not been calculated.

TABLE NO. 11

Net Production of Gur in India by Provinces and States during 1937-38 and 1938-39.

Provinces and States	1937-38	1938-39
United Provinces (including States) ...	1,875,000	1,347,000
Punjab	271,000	165,000
Bihar	55,000	124,000
Bengal	377,000	350,000
Madras	178,000	187,000
Bombay (including States) ...	179,000	152,000
North-West Frontier Province ...	64,000	50,000
Assam	33,000	31,000
Central Provinces and Berar ...	42,000	41,000
Orissa	52,000	52,000
Sind	10,000	9,000
Delhi	2,000	400
Mysore	32,000	20,000
Hyderabad	51,000	50,000
Baroda	3,000	5,000
Bhopal	3,000	2,000

We have also observed that 362,692 tons of *gur* were exported from the United Provinces, 96701 from Bihar, 30890 tons from Madras, 19237 tons from Bombay and 32980 tons from the N. W. F. Province to other parts of India during the year 1937-38, and that 1,48,658 tons were imported into the Punjab, 142519 into Bengal, 50980 tons into Bombay, 72000 tons into Rajputana and 35000 tons into Bihar during 1937-38. (*Vide*, Trade Journal, 30th May, 1940).

There is no carry over of *gur* as in the case of sugar. Almost all the Provinces produce the bulk of *Gur* needed for their requirements.

The maximum production is of course in the U. P. and the next highest in Bengal and then Punjab, Madras, Bombay (including States) and Bihar.

Substitution of Gur by Sugar possible?

The consumption of *gur* has increased considerably during the last 6 years as compared with the consumption of sugar except in the year 1938-39 when it has suddenly fallen due to the shortage of the cane crop.

The continuance of the production and consumption of *gur* in India in such large quantities, even in the face of all the modern methods of sugar refining is a remarkable feature of the national economy of the country and on that account the study of this question is bound to be of interest. With the improvement in the purchasing power of the people, the spread of the tea habit, and the substitution of sugar for *gur* in the sweetmeat trade and the demand for a clean and white product from sugar-cane it would normally appear that the consumption of *gur* should decrease but actually this has not been the case. The replacement of *gur* by sugar and the extent of such substitution depends mainly on the level of price of sugar and *gur*. If sugar becomes cheaper, most likely it may be preferred to *gur* to some extent and for some use, but if sugar rises in price, as has been the case during the last 2 years, people particularly in the villages—and 70 per cent. of the population of India live in villages—will certainly replace it by *gur*. Our view is that as in the past the consumption of *gur* and sugar will continue to rise slowly with the improvement in the economic condition of the people but it is improbable that there will be any serious reduction in the consumption of *gur* as a result of increased consumption of sugar, for *gur* is a delicious food liked by millions in this country and is not easily substituted by sugar. It is not only a sweetening ingredient in food and drink, it is itself an article of food and is on the dietary of a very large population in all parts of the country. (Also *vide* Tariff Board Report page 55).

Other Raw Materials for Production of Gur.

Principally, *gur* is manufactured from sugar cane but it is not the only raw material from which it is manufactured. It is also produced from the sweet juice of four varieties of the palm viz., Palmyra, cocoa-

nut, sago and wild date. Except cocoanut which requires cultivation, palms of other variety grow wild and no human nursing is necessary for them. There is a great possibility of development of this *palm-gur* industry in all the provinces in India.

From very ancient times the palm gur industry is in existence in our country. At present it is confined to a few districts of Bengal, namely 24 Parganas, Howrah, Midnapur and Faridpur and the districts of Godavari, Salem, Cuddappa, Tinnevely, Malabar etc. in the Madras Presidency.

Possibilities of Palmyra Gur for relieving land from cane-crop!

Palmyra and Date palm trees are in abundance in various parts of India. It is estimated that there are about 4 crores of Palmyras alone. If these palms are utilised for manufacturing gur and sugar they can not only add to the national wealth but they are capable of creating a revolution in national agriculture. *If the required number of Palmyras are planted, it seems, to us, possible within the next 30 or 40 years to relieve a bulk of the 40 lakhs acres of good agricultural land which is under cane crop at present and to consider the possibility of utilising such land for producing cereals and food crops in the production of which there is a deficiency in our country. It appears thus to be in the economic interest of the country to replace cane gur and sugar by palm gur and sugar to such extent as is possible.*

Village Industry of Palm-Gur.

The tendency is also noticed in these days of cane-gur drifting towards large scale production and having capitalistic potentialities. On the other hand, palm gur is essentially a genuine village industry and by the very nature of the business it must remain such. No tractors are necessary as in the case of cane cultivation for planting palms which are to be planted not every year but only once in 50 years or so. No big costly power crushers are required for extracting the juice which is done with the help of small instruments manufactured by the village smith. Palms are not only useful for gur supply, but also for manufacture of tasteful sugar of all grades from the palm juice in the villages with the help of small hand-driven centrifugals which also can be manufactured within the country by our own mechanics.

The technique of sugar making can also be taught to the villagers easily*.

Tapping of Palm-Juice,; Palm-Jaggery as good as Cane-Jaggery.

The method of obtaining juice from the palm is known as "tapping". Tapping is a delicate and complicated art and men are generally found conversant with this art in the areas in which the palms grow. These men are called tappers, and are mostly engaged in toddy-drawing. The method of tapping the palms is not the same for toddy and gur making. There are certain important variations which have to be practically learnt. Besides the knowledge of tapping two more things are essential; (1) to secure a license for free tapping of the palms from the Government (2) to know the technique of Nira drawing and gur making. Neither the sweet unfermented juice of any of the four palms is intoxicant nor the gur made from palm juice. The following chemical analysis shows that palm gur is akin to cane gur.

	Gur	Cane-sugar	Glucose	Ash	Moisture
1.	Sago Palm	76.455	1.642	5.995	1.681
2.	Date Palm	79.45	2.281	2.2594	3.05
3.	Palmyra	85.263	1.77	1.927	8.467
4.	Cocoanut	74.163	2.939	3.815	6.25
5.	Sugar Cane	65.209	17.052	1.35	7.38

Lakhs of people are using this without any harmful effects, in Bengal and Madras Presidencies. Hundreds of people in Orissa, Bihar, C. P., Bombay and U. P. have very recently used this gur to much advantage.

The utility of this industry as an avenue of employment for the erstwhile toddy-drawers has been recognised*. The Government of

*The report of the All India Village Industries Association for the year 1938 states that gur was being made under their auspices in Bengal, Andhra, Travancore, Cochin, Karnatak, Broach and Assam for the palmyra, and in Maharashtra, Bihar and Orissa from the Date-palm. In Karnatak a beginning was made during that year in training a few toddy tappers to manufacture sugar in one centre and to manufacture gur from the sweet juice of cocoanut trees in another centre. At Wardha, the headquarters of the all-India Village Industries Association, experiments were also carried on for facilities in the manufacture of gur. The Association also obtained a license from the C. P. Government in the year 1938 to use and sell Nira or sweet palm juice as a beverage. It is stated that it makes a good wholesome drink and should be popularised in villages.

Madras, Bihar, Orissa, U. P., and C. P. have provided for the free tapping of palms for gur-making in the dried zones. The tappers are being encouraged to take up the industry.

Wherever palm gur has been newly introduced, the people are relishing it and palm gur is much in demand every where. People are preferring palm gur to cane gur. Palm gur is of a light cream colour, is very pleasant to the sight and to the taste. It has an excellent flavour.

In Wardha district 308 date-palm trees were tapped in 1939-40 season; 39346 lbs Nira was drawn, 18992 lbs. Nira was sold as beverage and from the rest 1518 lbs. gur and 764 lbs. Rab were manufactured.

Quantity of Palm-Jaggery in Bengal & Madras.

The total quantity of gur produced other than that from cane is estimated at about 100000 tons per year in Bengal. The palm juice gur manufacturing industry is an industry of great importance in Madras where the production is estimated at about 40000 tons during a season.

Cocoanut Palm-Jaggery.

Dr. J. S. Jatel, Ex-cocoanut Enquiry Officer of the Imperial Agricultural Research Council recorded that a tapper can earn Rs. 54.6 in six months from 15 cocoanut trees and 40,000 cocoanut palms are tapped for jaggery making in the Madras Presidency.

Date-Palm Jaggery.

The average annual production of gur per tree is 12.25 lbs. 500 trees can be grown per acre, so that the yield per acre would be 4 tons.

Prospects of Date Sugar.

Date-palm can be grown at a nominal cost. The yield of sugar is an absolute certainty and the trees once grown yield sugar for 30 years on an average. The yield of sugar per unit area in date palm is much higher than in cane.

Nutritive Value of Gur.

We cordially welcome the All-India Village Industries Association which was established by the Indian National Congress under the

*(Vide Harijan, Dated 10th and 17th July, 1937, article by Sjt. Gajanan Naik).

guidance of Mahatma Gandhi in November 1934, particularly on account of the propaganda which that Association has undertaken for the popularisation of Gur. The Association undertook this task not only on purely economic grounds of promoting a cottage industry but also because it was satisfied about the superior nutritive value of Gur. Mahatma Gandhi in the course of an editorial in the "Harijan" dated 13th April, 1935 observed:—

"Most undoubtedly people will be advised to use Gur for their milk and tea. They will be told, as they are being told, that it is superstition to think that Gur taken in milk or tea is injurious to health. One correspondent says that on his wife beginning to take Gur with her tea instead of sugar she lost her constipation. I am not surprised, because Gur has a mild laxative effect which sugar certainly has not".

Gur, a wholesome Article of Diet.

Indeed, it cannot be disputed that gur is a wholesome article of food. It has been on the daily menu of millions of our countrymen since generations. As the nutritive value of gur is being brought to the notice of the people, it is expected that its consumption will show an increase. We might give a warning, however, that the production of gur, as it is carried on now is wasteful in many respects, and it will be advantageous in the national interests if suitable improvements were introduced in the manufacturing process of gur, for minimising the waste of raw material, increasing the extraction of sucrose, for producing it under more hygienic conditions etc., etc.

Necessity of improvement in village factories manufacturing Gur.

The importance of the Gur Industry which consumes 3 to 4 times the quantity of cane consumed by factories approximating to about 62 per cent of the total cane-crop, cannot be overemphasized. Any improvements in and development of the gur industry will be of great benefit to millions of cultivators, and should therefore receive careful consideration of the various Provincial Governments.

Many of the village factories are inefficient, leaving behind in the bagasse a considerable amount of sugar—often as much as 20 per cent of the total quantity. The difference in efficiency between the village process and a good factory is visible from the fact that from a given weight of cane, the factory obtains as much sugar (99½ per cent purity) as the village obtains Gur (80 per cent purity). In both cases, the amount of the product obtained is about 10 per cent of the

weight of the cane: *Gur* 10 per cent Factory sugar 9.5 per cent and Khandsari sugar 5.5 per cent. It would be very helpful if village factories are set up with efficient mills for extracting the juice, vacuum pans for evaporation, and arrangement for clarification by filtering through charcoal. Thus better quality and higher yield can be obtained. We are glad to note that experiments for improving the making of *Gur* are being made in Bihar, Bengal, Punjab and the U.P. We are glad to find that the All-India Village Industries Association is taking a keen interests in the matter, since the year 1937.

Palm-Jaggery Production also Deserves Encouragement.

We would recommend adequate encouragement for the manufacture of palm jaggery along with sugar-cane jaggery. Both are important village industries deserving equal attention and encouragement for creating employment and a better diet for the masses. The manufacture of palm jaggery has become important from another point of view also viz. of diverting the energy of the tappers into a better channel. This aspect has assumed a greater importance, particularly since the advent of the programme of Prohibition sponsored by the Congress Ministries in various provinces. Nature's gift of palms can also thus be utilised to the greatest advantage. Chemical analysis of jaggery made from palm has shown that it has almost the same ingredients as are possessed by the jaggery made from sugar-cane juice and indeed lakhs of people are using it with beneficent effects in the provinces of Bengal and Madras. No one need have any apprehension that palm jaggery would be intoxicative. It is as useful and harmless as the jaggery made out of sugar-cane, and, indeed, is equally delicious. Palm-Juice *gur* finds a ready market, owing to its flavour.

During the year 1939, since the introduction of the prohibition in several districts in Bihar, the Government of Bihar are making endeavours to manufacture *Gur* from palmyra juice. They expect that the experiment which is showing signs of progress will succeed in obtaining employment to the old toddy-vendors and be profitable to the owners of the trees also.

Effect of sugar prices on its consumption.

We have observed before that the consumption of sugar in the country varies from year to year with the price of sugar, the economic condition of the people and the price of *gur* etc. We might observe here that, contrary to the general belief, there has not been a notably

large variation in the total consumption of sugar in the country from year to year, depending upon the basis of a rise and fall in the internal price of sugar in the country. Doubtless in a year in which the price of sugar has witnessed a considerable rise or fall, the consumption has certainly shown a tendency to fall or rise, but as we observed before, there has been no commensurately large increase or decrease. For instance, in the year 1925-26, when the yearly average price of Java Sugar at Calcutta was Rs. 10-15, the estimated consumption of sugar was 1,011,000 tons, and in 1931-32, when the price fell to Rs. 10 the consumption was only 9,82,000 tons.

From 1932-33 to 1936-37, there was a progressive reduction in the price of Indian sugar and in 1936-37 it reached its lowest level—lowest for the last quarter century for which we have statistics available, or perhaps for a longer period still.

We estimated the total consumption of 1938-39 at about 10½ lakhs tons. This high price of sugar continued during the year 1939-40 also and we expect the consumption to be only of the order of 3¾ lakhs tons during 1939-40. It must be observed however that there is *no very close relation* in the Indian market between price level and its total consumption. *Within limits*, doubtless, a fall in price will stimulate consumption by bringing it within the reach of the poorer classes also, but a slight increase does not make a tremendous difference, particularly as those who are well-placed will have their usual quantity of sweets whether the sugar sells at 0-3-0 or at 0-5-0 per lb. Even so, we do feel that in a country like ours where the majority of the people are very poor and who are compelled to repress their natural inclinations of consumption of more sugar due to its high price, *there is an excellent opportunity for the expansion of the consumption of sugar with the lowering of price.* Apart from the increase in consumption which will be of benefit to the factories it will also enable the people to improve the standard of living by taking such nutrition as is available from sugar in larger quantities and in accordance with international nutrition standards. We strongly recommend that the industry should keep this aim prominently before it and should endeavour to reduce the price of sugar to the level of Rs. 7|8|-per maund and thus encourage the consumption of sugar in the country for the benefit of the people as also of itself.

As observed above, there are other factors too which influence the consumption of sugar in the country, viz., the economic condition of the ryots and the general populace, the price at which *gur* (the consumption of which is $3\frac{1}{2}$ times as large as that of sugar) is sold at various places in the country etc.



PART II

Present Problems of the Sugar Industry and Its Future Prospects,

Need for Regulation, Consolidation, and Organisation.

In the preceding pages, we have made a rapid survey of the vicissitudes through which the industry passed during the year 1939-40 and we have also referred to some of the chief problems now facing the industry. The stage of an overproduction of sugar having now definitely been reached, we feel that the industry must make strenuous efforts for setting its house in order, for consolidating its position and for establishing itself on stable, sound and scientific lines by a thorough reorganisation of the industry in the desired directions. Above all, we feel that the industry and the Governments concerned should address themselves to this question seriously and without any delay.

Basis of Fixation of Cane Price in recent years Manufacturers' view regarding its effect.

In the "Sugar Industry at a Glance" we have shown the basis of the fixation of cane prices in U. P. and Bihar as also in other provinces during the last 5 years. During the last year there was a lot of controversy in regard to the appropriateness of the sliding scale of prices which was made applicable in the U. P. and Bihar. The sliding scale in use during 1939-40 was so framed as to decrease the profit of the manufacturers as the price of sugar rose. The higher the sugar price is, the lower will be the percentage of profit to the factories and an increasing share of the higher prices is transferred

to the grower in the form of much higher cane prices. The following statement shows the extent of the profit to the manufacturers, with every rise in the price of sugar.

Mean Sugar Price according to Sliding Scale			1 According to Mr. R. C. Srivastava's figures	2 According to Tariff Board figures	3 According to Syndicate figures
Rs.	A.	P.	% profit	% profit	% profit
10	15	6	9.04	4.90	3.26
11	2	6	7.54	4.17	2.64
11	5	6	7.86	4.38	2.74
11	8	6	7.96	4.49	2.84
11	11	6	8.18	4.76	2.94
11	14	6	6.37	3.98	2.30

The present sliding scale has been based on an Excise Duty of Rs. 2/- per cwt.

We would like to quote here the remarks made by Mr. J. Aitken at the 8th Annual General Meeting of the Indian Sugar Mills Association held at Cawnpore on the 14th September 1940 in regard to the position of the manufacturers owing to the sliding scale, in 1939-40.

"A more ill-conceived and discriminatory piece of machinery can scarcely be contemplated. I have always understood that it was one of the principles of good government to do everything possible to prevent the benefiting of one section of the community at the expense of another. The scale visualises maximum profits to the manufacturers of up to 4 per cent only (against which taxation, if applicable, is a charge) whereas cane-growers are provided for on such a magnificent basis that their profits may quite easily, as they did last season, run up to as much as 125 per cent. It is evident, therefore, that sound government principles were not allowed to feature prominently with the committee responsible for the sliding scale. In making this statement, I have not overlooked that the Indian Sugar Syndicate Ltd. was represented on the committee; the gentlemen concerned have, I understood, already indicated that the attitude adopted by the other members of the committee was such that any alternative to the sliding scale would have been an even greater imposition on the manufacturing side of the industry."

The industry estimates 4 annas a maund as the cost of cultivation of cane and on that assumption when cane-growers obtained an average minimum price of 10 annas a maund their profit worked out to about 150 per cent, while the manufacturers could not make even 2 to 3 per cent.

We are glad to say, however, that during the 1940-41 season the Governments of U. P. and Bihar have thought fit to abandon the sliding scale of fixing minimum prices of cane co-related to the sugar prices during the previous fortnight and to fix an irreducible minimum price of cane at a considerably lower rate of -4/3 per maund for the entire season. The sliding scale and the method of fixing minimum prices of cane correlated to the price of sugar was not generally favoured at the All-India sugar conference held at Simla. A copy of the speech of Sir Ramaswami Mudaliar at the Conference, as also the speech of Mr. P. M. Kharegat reviewing the position of the Sugar Industry in the 1939-40 season have been given in the "Sugar Industry at a Glance". For facilitating reference we have given the sliding scale in use in the 1940-41 season also in the "Sugar Industry at a Glance".

Principle of fixation of price of cane

We feel that it would be better to fix the price of cane at a non-varying rate for the entire season, and to attempt in a suitable manner to let the cultivator share in the profits of the industry, if it is able to realise higher prices of sugar than were contemplated at the beginning of the season, by a deferred payment, for cane supplied by the cultivators, at a later date, after accounts are made up.

Sugarcane--Necessity of Improvement in Cultivation.

The conditions of sugar production in India are peculiar and have hardly any parallel elsewhere. The manufacturers in India generally do not produce the raw material, viz., cane as they do in Java and other countries from their own extensive plantations round about the factories but they depend on a large number of agriculturists with small holdings of land independent of each other and working without any definite system, industrious but lacking in capital, in resources, and in scientific knowledge and consequently incapable, in the absence of any guidance either from the Government Departments or from the factory owners, of making use of modern, up-to-date and scientific methods of efficient cultivation, crop-rotation, manuring, etc. This is a very important factor which has to be borne in mind in a study of the problems of sugarcane and of agricultural improvements in India.

Bombay is the only Province where factories grow cane on their own land, almost entirely.

As a result of high minimum prices of cane factories in other provinces are trying to acquire land for cane cultivation.

Extension of Cane-Cultivation or Improvement?

A glance at the area under cane cultivation in relation to the requirements of sugar and gur in the country will show that at present we have a sufficient acreage under cane for meeting the requirements of sugar of the country. There is therefore no necessity of increasing the area under cultivation (in 1940-41 the area under cane is estimated at 42,44,000 acres). We feel however that it is essential to improve the quality of cane as also the yield of cane with a view to lower the cost of cultivation in preference to an extension of the area under cane, under the present circumstances.

Diseases in Cane and Pests must be eradicated.

It is equally essential to eradicate the diseases in cane and pests. We are also aware that in respect of the yield of cane per acre, its sucrose-content or average percentage of recovery of sugar from cane, we are still far behind many other sugar producing countries *viz.*, Java, Cuba, Hawaii and the Philippines. It is equally certain that unless we are able to effect considerable improvement in this direction it will not be possible for us to stand competition with other advanced countries of the world. What due to plantation of cane without a scientific system of rotation of the cane crop, what due to extended ratooning, what due to absence of manure and fertilisers, what due to lack of plentiful supply of water either through irrigation or tubewells, and what due to diseases and pests, our cane crop is poor both in respect of yield and quality. *The direct consequence of this is the high cost of production of cane per acre, and a great national loss, valued at millions of Rupees to the agricultural community in the country.*

In addition to these causes, great harm is occasionally done to the crop by insect damage in various provinces. For instance in 1939-40 there was a widespread outbreak of redrot and wilt in the cane growing belt of Bihar, and it appeared that the infection was worst where the largest areas were kept under Ratoons. The Bihar Government issued a press communique in July 1940 pointing out the great danger of infection to cane crop from Ratoons and they also observed that it was their intention to fix considerably lower prices for Ratoon.

cane than for plant cane. The Imperial Council of Agricultural Research also issued a note regarding the Pyrilla Pest and observed that the best time to prevent Pyrilla damage was early in the year when sugar cane plants were generally young and not high or leafy to prevent labourers from going into the fields. They also stated that the records showed the Pyrilla was a bad pest which occurred in 4 or 5 years and as the last outbreak was in 1937, the years 1940 and 1941 were considered dangerous for the recurrence of the pest. They therefore recommended that widespread publicity should be given amongst sugar-cane growers and they should be asked to keep a close watch on the sugar cane fields for any appearance of Pyrilla in numbers, to collect and destroy immediately all leaves so affected and to avoid Ratooning as far as possible in 1940.

Education of Cultivators by Demonstration of Improved Methods.

Apart, however, from this immediate and important task of research work in connection with the problem of pests, there is a great necessity of undertaking other measures which would bring home to the cultivator the necessity and the desirability of effecting improvements in the conditions of cultivation of cane. The average cultivator in India is hardly aware of the latest improved methods of farming or manuring or crop rotation or selection of varieties suitable to the soil, and he simply carries on the old and traditional methods of cultivation from year to year without worrying about the importance of effecting any improvement in the quality or the quantity of the cane grown on his fields. *Sugar-cane crop is one of the most important crops of the country, the annual value of which has been estimated at over 60 crores of rupees, and the prosperity of this second largest Industry of the country is closely linked with it.* Apart from this, as the Provincial Governments, are aware, the growth of the sugar Industry adds substantially to the resources of the ryot and even in the midst of a period of depression it has enabled him to pay his rent or land revenue, his irrigation dues, and other taxes. It is therefore the duty of the Government to devise suitable means of imparting instruction in modern methods of cultivation to the ryot and to make available to him the fruits of organised research with a view to improve his economic condition, and also to put the industry on a sound basis. Although it is satisfactory to note the work done in this connection by the Sugar-cane Research Stations at Coimbatore, Shajahanpur, and Muzaffarnagar, Karnal, Padegaon in the Deccan Canal area, Mushari (B. & O.), Pusa, Dacca, Mysore, the Jorhat Experimental Station in Assam, at Risalewala and Jullundur in the Punjab, at

Bangalore, Anakapelli, Madras, Hyderabad and other places, and although improvements are slowly being effected in the quality of cane grown in the various provinces, we feel that the time has definitely arrived when we should redouble our efforts to establish more intimate contact with the cane-cultivator and to initiate him into modern methods of better farming by actual demonstration. For this purpose it is essential to establish a series of demonstration farms and nurseries in all cane-growing provinces in order that they may devote their energies to the propagation of cane of higher sucrose-content, of higher tonnage, of early and late-ripening varieties for the extension of the crushing season, of increasing the yield by suitable crop-rotation, by provision of a suitable supply of water through irrigation or tube-wells, etc. These demonstration farms and nurseries should also serve as centres from where trained agriculturists would tour round the surrounding districts in order to show or demonstrate efficient methods of cultivation and manuring suitable to the soil in the various places and would distribute disease-free seed amongst the cultivators. An important function of these farms would be to conduct researches as to the methods of combating cane diseases and pests. In addition to the establishment of such farms, it is also necessary for the Provincial Governments to undertake other allied works of effecting improvement in the cane cultivation by educating the ryot in the use of irrigation water, by providing better facilities of irrigation, by extension of the canal system, and by affording suitable assistance in tapping the subterranean sources of water supply.

Improvement of Cane Crop.

The immediate necessities for the cane crop of India are improvements aimed at lowering the cost of cultivation, as for example, by increasing the tonnage per acre which in turn will give a better return to the cultivator and (2) raising its quality e.g., by producing varieties having higher sucrose content and greater resistance to diseases and pests so that it may command a higher price from the sugar manufacturer and produce a larger quantity of *gur* for the same weight of cane. Steady work of improvement may immediately be taken in areas adjoining sugar factories which have been reserved and assigned for the sugar factories in accordance with the Bihar and U. P. Sugar Factories Control Rules, as they are likely to give immediate benefit both to the manufacturer and to the cane grower. We might also observe that the ultimate success of the industry hinges upon the availability of suitable quality of cane at considerably lower prices than at present and that this can only be

achieved by comprehensive research work in the production of sound, healthy and disease-free canes with plenty of sucrose content, and the extension of the cane-crushing season from about 4 months as at present to at least 7 months in the year by encouraging and promoting the growth of early ripening and late-ripening varieties of cane suited to the climatic conditions of the various areas of production.

Valuable Educational Effect of Cane-crop.

Sir John Russel, F. R. S. a distinguished British Scientist, in his Report on the work of the Imperial Council of Agricultural Research in applying Science to Crop-Production in India published in October, 1937, observed that the Imperial Council can justly claim credit for the great success in its activities in connection with the production and utilisation of the cane crop. We may observe here that although the total area under sugar cane is only about $3\frac{1}{2}$ million acres out of 277 million acres cultivated, in India, the importance of the sugar cane crop is out of all proportion to the area which it occupies. In so far as the cultivator is concerned, sugarcane has a valuable educational effect. In the words of Sir John Russel, "He learns the advantages of modern varieties of crops, of fertilizers, of proper cultivation; the need to watch for plant diseases and to seek advice when he is in difficulties. The Agricultural Officer has more chance to coming in touch with a sugarcane grower than with an ordinary small cultivator. From the national point of view, India is a heavy consumer of sugar including *gur*, of course, standing second amongst the nations of the world and being surpassed only by U. S. A."*

We have referred in detail to the question of inter-provincial research organisation for U. P. and Bihar in our last Annual.

Imperial Council's Commendable Work for Industry.

The Imperial Council of Agricultural Research from its inception had in hand a programme for implementing the Government's decision to foster the production of white sugar in India. This programme was in three parts: (a) the selection of cane better suited to the important cane growing districts than the existing local varieties and the improvement of their cultivation (b) the improvement of local methods of making *gur* and (c) the development of an advisory and research service for the sugar factories. As has been pointed out

*The consumption of sugar in the U. S. A. in the year 1934-35 was estimated at 5,870,000 metric tons. in the United Kingdom at 2,283,000 metric tons and in British India at 3,350,000 metric tons.

above, the selection and breeding work has been accomplished with great success. Investigations on the breeding of sugar cane started by Dr. Barber have been developed with great success by Rao Bahadur T. S. Venkataraman who has also invented many devices for overcoming various experimental difficulties.

Besides the plant breeding work proceeding at Coimbatore, a special method involving mutilation or destruction of some of the chromosomes by X-rays is being tried by Dr. Badami at Bangalore and irrespective of whether this produces better sorts or not, it promises to give new material of value to the breeder. The area under improved varieties occupies a very large proportions, no less than 75 per cent. of the area under sugarcane, and this is larger than for any other crop. It will be more helpful if a simplified form of experiment including practical combination of varieties, irrigation, manuring etc. would be tried on the land belonging to the cultivators. Conclusions drawn from experiments at Research Stations would be greatly strengthened if they are confirmed on other farms also.

We would invite the attention of the readers to the small booklet entitled "A Summary of Some Practical Results of Sugarcane Research in India" issued by the Imperial Council of Agricultural Research. A revised edition was issued in 1940.

Improvement in Yield possible in India.

While the yield of great tracts of the main sugarcane producing Provinces was still far from satisfactory as compared with the yields got, say, in Java, it is definitely proved from the work of the Indian Research Stations as also from the experience of factories growing canes that high yields are possible. Experiments conducted with Co.-360 and POJ-2878 at three sugar factories, one Government Farm and three cultivators' fields in different parts of Deccan-Canal area, in 1935-36 showed encouraging results. On the Ravalgaon Sugar Factory 50.5 tons of the former and 41.4 tons of the latter was the yield per acre. In a competition organised by the Maharashtra Chamber of Commerce in 1935-36 yields of 80 to 100 tons of cane per acre were obtained without any reduction of sugar. In Mysore, in 1935-36, H. M. 320 yielded as much as 36.86 tons per acre while H. M.-606 yielded 51.88 tons per acre and H. M.-607 yielded 50.40 tons per acre.



Rotational Trials.

The following up of a cane crop too closely by another cane crop tends to exhaust the land. Green-manuring the land with *San*

previous to sowing the crop supplemented with additional manuring with nitrogen in the form of cake or Ammonium Sulphate at the time of planting has generally been found useful.

Ratooning.

Ratooning is a subject on which there has been a good deal of controversy, particularly since there is some evidence that ratooning causes an increase in insect pests. The period of profitable ratooning varies greatly in different localities and depends on the soil, variety and the treatment which the crop receives. Ratooning as at present practised has acquired a bad name, perhaps because the crop is often neglected. Canes differ to some extent in their performance as plant canes and as ratoons. On the whole thin canes are better suited for ratooning than thick canes although thick varieties have also been found to ratoon well in certain places. This subject was discussed at the Sugar Committee meeting in July, 1936, where it was noticed that opinions of Directors of Agriculture, of factory owners and of cultivators were divided as to the increase of insect pests in cane as a result of ratooning. The question is under further examination by scientifically planned experiments. The matter is at present receiving the attention of the Imperial Council of Agricultural Research. The view generally held, however, at present seems to be that first ratooning is all right. Ratooning of cane crop beyond one season does not find much favour amongst the factory owners. (*Uide* 1937 Annual, pp. 69-73).

It is now being realised that ratoons are easily susceptible to diseases and should be discouraged as much as possible.

We have referred in our last Annual to the use of molasses and Press Mud as Manure for sugar cane cultivation and have shown the beneficent results that have followed from it.

Tube-well Project in U. P.

The first extensive tube-well project in this connection has been tracts of the seven western districts of U. P. where for various seasons sonctioned in the U. P. seeks to provide irrigation facilities in the dry canal irrigation is not possible. They represent an investment of 52 lakhs of rupees. This project will command nearly 1½ million acres which will now be fully protected. About 1,300 tube-wells are now working and each one has been so located that it can command an area

of 2 square miles with an approximate average of 1,000 acres of culturable area.

Allocation of Sugar Excise Fund for Improvement of Cane.

In his budget speech of 1934, Sir George Schuster, the then Finance Member of the Government of India announced that an amount equivalent to anna 0-1-0 per cwt. of sugar assessed to sugar excise duty would be set apart to form a fund to be distributed amongst the provinces where white sugar is produced for the purpose of assisting the organisation and operation of co-operative societies among cane-growers so as to help them in securing fair prices or for other purposes directed to the same end.

The Government of India have allotted or earmarked varying amounts of money for various Provincial Governments out of the Sugar Excise Fund. In the 1939 Annual we have given details about the schemes which were thus financed during the past years.

U. P. Scheme of Cane Development.

We give below extracts from a short official summary in regard to the progress and development of the Cane Development Scheme and marketing for the year ending 30th June 1940.

The Cane Development Scheme was started towards the end of 1935 with the help of contribution from the Government of India. The U. P. Sugar Factories Control Act provided for the reservation and assignment of areas and since 1938 that system has been in vogue.

The number of sanctioned zones remained the same as last year, viz., 136. The number of villages in the cane development scheme increased during the year from 8,800 to 13,700 and the number of cultivators who benefited from the scheme went up from 3 lakhs to 4,80,000.

Sugar cane seed was distributed in the various areas, through the Department. The predominant varieties were Cos. 312, 331, and 213. A number of new varieties were introduced on a general scale for the first time. These varieties (Cos. 421, 356, 341 and 385) will gradually replace the old varieties where the latter have deteriorated. In the Lakhimpur-Kheri district Co. 331 covers a large area. It is a late variety and is resistant to waterlogging and disease. Sugar cane seed was also distributed in areas outside the Cane Development zones.

The difficulty experienced by the Department was in regard to the introduction of early ripening varieties as it had no early ripening

varieties which is also a reasonably heavy yielder. Experiments are being conducted at Shahjahanpur Government Farm to discover a suitable early variety. If one such is discovered one of the major problems will have been solved.

Manuring.

Progress was made in improving manurial practices. A consciousness was created amongst the cultivators of the necessity of proper manuring not only for getting immediate better yields but even more for preserving and increasing the fertility of the soil.

During the year several fertilizers were distributed amongst the growers. The practice of green manuring was also encouraged.

Great progress was witnessed in the introduction and popularisation of implements.

Insects, pests and diseases.

Preventive measures against pyrilla were continued in the Western Range under the guidance of the Cane Entomologist and a few sporadic attacks were successfully controlled. In the Rohilkhand Division there was an attack of red rot but the areas in the cane development zones completely escaped from it. An anti-red rot week was organised in August 1939 and about one thousand meetings were held in this connection in the villages. Control measures included removal of affected canes and the introduction of healthy and selected seed.

Marketing.

The number of co-operative societies marketing cane and associated with the cane development scheme increased from 73 to 81 and the number of villages in which they operated from 13,900 to 18,471.

There was no change in the system of organisation.

The total quantity of sugarcane supplied to factories by all the Co-operative Societies in the Western Range was 758 lakhs maund as compared with 304 lakhs maund in the previous year. The total quantity of cane crushed in this Range was 858 lakhs mds. Thus the Society supplied 88 per cent of the requirements of mills. In the Central Range the total quantity of sugarcane crushed by factories was 369 lakhs mds. of which the societies supplied 274 lakhs mds. which gives a percentage of 74. In the Eastern Range 38 per cent of the total crush of the mills was supplied by the societies.

Improvement of communications.

Special attention was paid by many societies towards improvement of the communications in their areas. The societies spent about Rs. 70,000 for the improvement of communications. This sum was made up of contributions from the societies, the growers and the factories. Other rural development activities of the department included the improvement of irrigation facilities, improvement of the quality of live stock and propaganda for the improvement of the sanitary conditions of the villages. A noteworthy feature of the working of cane development societies was the collection of thrift deposits from their members. In a year when their cane fetched high prices it was easy to collect such deposits and a sum of a lakh of rupees was collected by the societies in the Central Range.

*Research on Sugarcane in the section of Economic Botanist,
U. P. Governments.*

We give below a short resume of the work on sugarcane carried out in the section of Economic Botanist (Sugarcane & Paddy) to Govt. U. P., during the year 1939-40.

The investigations on the sugarcane crop were continued at the three stations of Shahjahanpur, Muzaffarnagar and Gorakhpur, representing the conditions generally peculiar to the Central, Western and Eastern U. P. Besides the above, investigations into the problems of Ratooning were also conducted for the first year.

Experiments carried out during the year included (1) Varietal Studies at Shahjahanpur Station. It was found that Co. 421 has again established its superiority over all others as the best yielding cane. (2) Agronomical studies, (3) Rab and Sugar trials, (4) Chemical Investigations and (5) Physiological Investigations.

At the Muzaffarnagar Station also, Similar experiments were carried out which included entomological investigations regarding the infestations by stem borer, top borer etc. Experiments were also conducted at Gorakhpur which included Varietal Trials as also Agronomical Trials.

4. *Cane Advisory Committees in U. P. and Bihar.*

During the year the Government of U. P. established 4 Cane Advisory Committees, one for Meerut, one for Rohilkhand, one for

Lucknow and one for Gorakhpur. The Bihar Government also appointed a Provincial Cane Advisory Committee as also Advisory Committees for the Rohilkhand Division and for Saran, Champaran, Muzaffarpur and Darbhanga during May 1940.

Bihar Cane Co-operative Societies working in 1938-39.

We have referred in our previous Annuals to the scheme sanctioned by the Government of Bihar for the organization and operation of Canegrowers' Co-operative Societies in December 1935. Two Special Officers at Pusa and Chapra, 13 Organisers and 13 Supervisors were appointed under the scheme. The intention then was to form experimental Societies in the area of a few factories. During 1936-37, 103 Canegrowers' Co-operative Societies supplied 9 lakh mds. of cane to sugar factories and during 1937-38 215 Canegrowers Co-operative Societies supplied 16 lakh maunds to sugar factories.

Early success of Canegrowers' Co-operative Societies.

When the Bihar Sugar Factories Control Act, 1937, came into force, Government announced their policy to form Canegrowers' Co-operative Societies in all villages in the reserved areas of sugar factories and the number of Co-operative Societies increased gradually. The total supply of cane by 425 Canegrowers Co-operative Societies amounted to 13 lakhs mds. in the crushing season 1938-39.

Canegrowers' Co-operative Societies in 1939-40.

With the appointment of additional officers in 1938-39 there are now 4 Special Officers, 35 Organisers and 70 Supervisors in the Province. 671 Canegrowers' Co-operative Societies were organised in the reserved areas of factories in 1938-39. Thus 1096 Societies operated in the crushing season 1939-40 and supplied 66 lakh mds. of cane to sugar factories. It is expected that during 1940-41 1500 Societies with 37,000 members will operate.

A significant feature of the operation of these Societies during the year was that they were placed under the control of Colonel C. A. MacLean, Cane Commissioner, from the 16th November 1939. The Cane Commissioner was appointed the Joint Registrar of Co-operative Societies and also the Cane Development Officer under the Cane Development Scheme sanctioned by the local Government. While the two Departments are being maintained separately, instructions have

been issued to Special Officers of these Societies and Assistant Directors of Agriculture to work in the closest collaboration in the reserved areas.

Introduction of improved varieties of cane.

It is gratifying to state that Canegrowers' Co-Operative Societies in North Bihar expect to supply more than 50 lakhs mds. of Coimbatore 299 and Coimbatore 313 in the 1940-41 season. 75 per cent of the net acreage under cane belonging to these Societies in South Bihar is under Coimbatore 331.

Along with the popularisation of improved methods of cultivation of greater sucrose yielding varieties of cane, these Societies launched on a vigorous programme for the efficient conservation of farm yard manure by their members. The ideal is to induce every member to prepare a manure pit and compost heap. Endeavours are also being made to induce members to use improved agricultural implements designed by the department of Agriculture.

Mass literacy work carried on.

Vigorous efforts were also made by the Societies to promote mass literacy. 250 literacy centres and a number of education classes operated during the period under review. 4630 adults were made literate.

The Societies also interested themselves in the construction of wells for meeting the acute scarcity of drinking water. Efforts were also made to repair village roads partly with voluntary contributions made by members and partly with the help of District Magistrates from the grant for the improvement of village communications.

Common good Fund.

The Common Good Fund also continued to grow. Members of these Societies are contributing one to three ples per maund of the cane sold by them to the Common Good Fund of their Societies voluntarily. If every Society collects a capital of Rupees One thousand from such voluntary contributions and partly from their profits, they will become independent of outside help for financing the sugarcane cultivation within a short time.



Sugar Research and Development in Bihar during 1939-40.

During the year, the Agricultural Department continued its research work for improvement of sugar cane crop. We give below

extracts from a note of the Department of Agriculture, Bihar, indicating the problems to which they paid attention:—

Co. 299 maintained its outstanding performance as a high sucrose variety and an opening mill cane. Co. 313 the next best sucrose variety on account of its heavier tonnage and wider range of adaptability is finding increasing favour with the grower and along with Co 299 it is likely to replace the two main-season varieties Co. 210 and 213 in the white sugar belt of Bihar. The latter two varieties have become susceptible to pests and diseases and the recent red rot epidemic has very nearly wiped them off in certain areas with the result that a phenomenal increase in acreage under Co 299 and Co 313 varieties which are comparatively free from red rot was immediately expected. The two new varieties namely Co 356 and Co 513 were under collaborative trials with the industry for the last two seasons and showed consistently superior agricultural and mill performance besides being highly resistant to pests and diseases.

Manurial.

The question of cane variety suitable for gur manufacture was also on the study. B. O. 4 appeared outstanding both in regard to quality of gur as well as its successful preservation during the monsoon.

Cane Entomology.

To understand the exact pest position in the province an intensive survey of major sugarcane pests namely borers, pyrilla and whitefly was undertaken.

Different reserved areas showed different incidence of the damage done by top-borers, stem-borers and root-borers.

A careful study was also made of the red rot epidemic that swept certain parts of the white sugar belt in Bihar. A thorough survey into the incidence and intensity of the diseases was carried out with the help of the factories and the cane development staff.

Allotment from Excise duty by the Government of India to the Provinces.

The Government of India allot one anna per cwt. out of the revenue derived from the excise duty to the various Provinces for the development of sugarcane. The Imperial Council of Agricultural Research recommended that the Government should place a sum equal

to 2 annas per cwt. of the excisable sugar produced in India for expenditure on approved schemes of research work. The U. P. Sugar Cane Conference in 1937 also decided to approach the Government of India that it should allot 3 Annas per cwt. of the excise duty. We feel that in view of the necessity of increased research work with a view to develop the industry on efficient lines at an early date, the Government of India should allot from the excise duty, particularly as the excise duty has now been increased to Rs. 3/- per cwt. with effect from 1st March 1940, a larger amount of 3 annas per cwt.

The Tariff Board also recommended that the allotment from excise duty should be raised from -1/- to 3 annas per cwt. as they were convinced that the only hope of the industry ever being able to compete on equal terms with other countries was a reduction in the cost of the raw materials.

The Sugar Committee at its 7th Meeting held in Simla in 1935 also recommended an increased expenditure on sugar research. (Vide 1939 Annual for the full text of the resolution).

On the 24th February 1939, Sir Girija Shankar Rajpai stated in the Assembly that it was anticipated that by the close of the year 1938-39 the Imperial Council of Agricultural Research will have spent about Rs. 10,42,000/- on sugar research from 1st April, 1936. The total expenditure on sugar research by the Imperial Council of Agricultural Research from 1934-35 onwards amounts to Rs. 27,25,599. Details of the Annual expenditure are given in a table in the "Sugar Industry at a Glance".

Paramount Need for Research Work.

The main problem of the Indian sugar industry has been, and still remains agricultural. Until the average yield of cane per acre is increased to about thrice its present yield of 16 tons per acre, the industry cannot be said to have been placed on a stable footing. The production of improved varieties of cane having higher sucrose content and yielding heavier crops, and their proper cultivation without affecting the fertility of the soil are questions of primary importance. These cannot be tackled unless the Government of India take a keener interest in the matter and make a bigger provision by granting a liberal amount of money every year for a comprehensive scheme of research, agricultural, engineering and chemical. A great deal has yet to be done both of the agricultural and manufacturing sides but more on the agricultural side before the sugar industry in India can be put

on its feet without the help of protection. The research work financed by the Provincial Governments is at present confined to the chemical, botanical, agricultural and engineering sections and to the experimental farms. Excellent work has been started by the chain of research and other stations subsidiary to Coimbatore which have been established by the Imperial Council of Agricultural Research in the main sugarcane belt of Northern India running from Peshawar to Assam. Mention must be made in this connection of the research work carried on in Anakapalle, Padegaon, Dacca, Shahjahanpur, Muzaiffarnagar, Mushari, Assam, Mysore, Pusa and of the technical programmes of work on new and extension schemes, as for example, scheme for research on anatomy and morphology of sugarcane, Sorghum hybrids, scheme for breeding thick canes in Mysore, scheme for research on the utilisation of bagasse for preparation of cardboard and insulated products from bagasse, scheme for investigation on the mosaic and other diseases of sugarcane, Bombay-Deccan sugarcane research scheme, scheme of research on insect pests of sugarcane in various Provinces, scheme for Research on Genetics of sugarcane, scheme for the manufacture of cattle feed from molasses, etc. These schemes are placed for review periodically before the meetings of the Sugar Committee of the Imperial Council of Agricultural Research. We feel, however, that it would be very helpful if the Government of India would publish from time to time reports on the progress of these various schemes and bring them to the notice of the industry in order to enable them to know and appreciate what is being done in this connection.

Rao Bahadur T. S. Venkataraman, C.I.E., is doing remarkable research work at Coimbatore in connection with the improvement of sugar cane and he has added to the reputation of the Indian plant breeders by his careful researches which have been of great economic value to the country.

He has been responsible for a complete change in the plantation of cane in the North India which has resulted in an increased output per acre of cane with greater sucrose content than before. His valuable researches, it must be admitted, have added several crores of rupees to the wealth of one Province alone, namely the United Provinces.

The problem of the Industry at present is mainly the problem of effecting improvements in the cultivation of sugarcane. It must be known; understood and realised that India will not be able to sell

sugar on equal terms in the world markets until the price of cane is brought down to about 3 annas per maund. In line with the progress made by the Industry in the matter of obtaining higher recovery percentages, strenuous efforts should be made whereby the cultivator can reduce his cost of cultivation to about 2 annas per maund, by intensive cultivation of his land, by the growth of cane of heavy yield etc., by proper crop rotation, by irrigation manuring and use of modern scientific knowledge. Just as manufacturing efficiency is no doubt important, agricultural efficiency and the percentage of sucrose in cane are still more important. The cost of the raw material, viz., cane, and the quality of cane are the most important elements in the competition and to that end, both the quality of cane and the yield of the tonnage per acre must be improved to a large extent.

Imperial Institute of Sugar Technology, Cawnpore.

The Government of India started the Imperial Institute of Sugar Technology at Cawnpore, for a period of 5 years, from 1st October, 1936. The Sugar Section of the Harcourt Butler Technological Institute was been taken over with the concurrence of the Government of the United Provinces by the Imperial Council of Agricultural Research and has been developed into an Imperial Institute of Sugar Technology. The Institute is undertaking research work on:

- (a) problems of Sugar Technology in general and those of the Sugar Factories in India in particular.
- (b) utilization of the by-products of the Industry,
- (c) detailed testing of the new varieties of cane under factory conditions, and
- (d) general problems of sugar engineering and chemistry.

The Institute provides adequate facilities for the training of students in all branches of sugar technology. The Advisory Board of the Imperial Institute approved the following courses of study in the Institute:

- (1) Associateship of the Institute in Sugar Technology—(12 admissions each year; duration of course 3 years).
- (2) Associateship of the Institute in Sugar Engineering—(12 admissions each year; duration of course 1½ years).

- (3) Fellowship of the Institute in Sugar Technology or Sugar Engineering (3 admissions for each section each year; duration of course 1 year).
- (4) Sugar Boilers' Certificate Course—(12 admissions each year; duration of course 1 year).

The Institute also provides sugar trade information services, bureau of sugar standards, and an employment bureau. The Institute is designed to serve the needs of the Industry in the technical, commercial and statistical matters. It does not however undertake agricultural work on sugar although all important information regarding this is collected and made available to the industry. The Institute gives technical assistance to factories when necessary and has a scale of fees for the various kind of work to be done. It also runs a small experimental factory for the manufacture of sugar by the employment of modern methods and is specially adapted for carrying out investigation of research work. In June, 1940, The Sugar Committee recommended that the Institute should be made permanent.

Cost of Cultivation of Cane & fair price of cane.

In the year 1933 the Imperial Council of Agricultural Research Instituted an enquiry throughout India to ascertain the cost of cultivation of sugar cane and cotton crops of India. The results of their enquiry have been published in several volumes dealing with Bombay, Bihar, Madras, U. P., Sind, C. P. Bengal etc. The Tariff Board also examined the cost of cultivation in the principal sugar producing areas. They have come to the conclusion that 0-3-7 per maund is a fair estimate of the cost of cultivation in the U. P., 0-3-4 in Bihar, 0-5-0 per maund in the Punjab, 3-7-0 in Bengal, 0-5-10 in Bombay and 0-5-5 in Madras. The Tariff Board also observes that allowing for the same climatic advantages, the possibilities of a general improvement in tonnage and quality are greater in the South than in the North, and an equalisation of the cost of production is, according to expert opinion feasible at no distant date (*vide* page 36 Tariff Board Report). For the purpose of estimating an All-India figure however the Tariff Board observed that greater weight must be given to the cost of cultivation in the United Provinces and Bihar, the main sugar producing areas. Taking all points into account, the Tariff Board considered that 0-3-9 may be taken as a reasonable estimate for the cost of cultivation for the whole of India. The Tariff Board further considered as to what would be reckoned a reasonable margin of profit to give the cultivator and arrived at the conclusion

that six pies per maund on an estimated cost of -/3/9 was in their opinion a fair figure. Adding the two, 0-4-3 per maund of sugar cane was the estimate of the Tariff Board of the fair price for cane.

Simla Sugar Conference.

While replying to the debate on the increase of excise duty in the Council of State on the 1940, the Hon'ble the Commerce Member gave an undertaking that if requested he will use his good offices to provide a meeting ground where the Provincial and State Governments concerned in the sugar industry could discuss various problem sthat have arisen affecting the wellbeing of the sugar industry. A conference was accordingly held on the 14th June in Simla. Various proposals for solving the crisis due to overproduction of sugar, method of fixation of cane prices, method of licenses etc. were discussed. The Conference however did not take any final decisions. The speech of the Hon'ble the Commerce Member is given in the "Sugar Industry at a Glance". The Speech of the Vice-Chairman, Mr. P. M. Kharegat is also given in the "Sugar Industry at a Glance".

Sugar Committee Meetings in 1940 & 1941.

We have referred to a brief summary of the proceedings of the 11th Meeting of the Sugar Committee held at Simla in our 1939 Annual. The 12th Meeting of the Sugar Committee was held at Simla on the 17th, 18th and 19th June 1940 and the 13th Meeting at New Delhi on the 7th November 1940. We are attaching below a summary of the proceedings of the 12th and 13th Meetings.

The twelfth meeting of the Sugar Committee of the Imperial Council of Agricultural Research, was held at Simla on the 17th, 18th and 19th June 1940.

The Committee considered 4 current schemes for extension, 11 new projects, 21 progress reports, 2 technical programmes and several other miscellaneous notes, and resolutions moved by certain members.

2. One of the most important matters discussed was the extension of the term of the Imperial Institute of Sugar Technology which was established at Cawnpore in October 1936 for a period of 5 years. The representatives of the sugar factories expressed warm appreciation of the work done by the Institute. The Committee were unanimously of the opinion that it should be made permanent on the expiry of its present term.

The scheme for Sugar Research and Testing Station, Bilari (District Moradabad) which started in November 1936 with the object *inter alia* of testing existing processes and machinery used in manufacturing gur, rab and sugar by the indigenous system, and undertaking research work for introducing improvements, was also recommended for extension from 1st December 1941 to the 30th June 1944. After careful consideration, the Committee also recommended (i) the proposal for bringing to the notice of the public the results of researches carried out at the Bilari Station by training the staff to be deputed by the provinces for studying the improved methods, and (ii) the scheme for imparting training in indigenous methods of *gur* and sugar manufacture to those already engaged in this industry.

3. The most important scheme among new projects was the proposal for the establishment of first class stations for undertaking comprehensive research on sugarcane in India, where all types of work (e.g. plant-breeding, varietal tests, chemical, statistical, mycological and entomological work, etc.) could be done on sound lines. In view of the importance of the subject the Committee appointed an expert Sub-Committee to go into the matter in full details.

The other new schemes discussed and recommended were

(i) Treatment of sugar factory effluents and the conversion of the molasses into cattle-feed and manure;

(ii) Grading of *gur*, *boora* and *rab*;

(iii) application from the Muslim Aligarh University for a grant for the study of the biology of the insect pests of sugarcane;

(iv) Scheme for a study of the soils of the sugarcane tracts in the U. P.; and

(v) Schemes for sugarcane research in Sind.

Among other items the Committee considered certain notes on the insect pests of sugarcane and their control, and the devising of a system whereby the factories can help the cultivator to increase the yield of cane.

13th Sugar Committee Meeting.

The thirteenth meeting of the Sugar Committee of the Imperial Council of Agricultural Research was held at New Delhi on the 7th November 1940.

The Committee considered three current schemes for extension, two new projects, four technical programmes, eleven progress reports, two other miscellaneous notes and resolutions moved by certain members.

2. Among the new projects the only item discussed and recommended for sanction by the Committee was the appointment of a physiologist at the Imperial Sugarcane Breeding Station, Coimbatore, for more intensive research on sugarcane physiology. The other new project discussed and postponed was the question of establishment of a Central Station for Sugarcane Research for South India at Padegaon, Bombay, on the lines of two stations already sanctioned for the United Provinces and Behar.

3. The Committee also discussed the question of the extension of regional section of the scheme for research on insect pests of sugarcane and recommended its continuance upto the 30th September 1941 pending examination of the working of the scheme by a special sub-committee.

4. Another important matter discussed by the Committee was the final report of the Council's scheme for the investigation on bagasse for the production of insulation and pressed boards, wrapping papers and straw-boards and a note regarding manufacture of celotex. The Committee recommended that the Council should publish a self-contained monograph incorporating information about celotex and other methods for the production of insulation and pressed boards, etc. from bagasse.

5. The Committee also discussed the question regarding intensification of work on improvement of sugarcane cultivation and passed certain resolutions in that connection.

Marketing Survey of Sugar.

The question of the marketing survey of sugar and sugarcane was discussed at the meeting of the Sugar Committee of the Imperial Council of Agricultural Research on the 3rd May, 1937 at Simla and such a survey was undertaken under the guidance of the Agricultural Marketing Adviser to the Government of India, with a view to assist in placing the sugar industry on a sound footing. The survey is estimated to cost about Rs. 50,000. We give below extracts from an official note on the position of the marketing survey of sugar up to the year 1940.

Note on the Marketing Survey of Sugar.

The marketing survey of sugar was started and was designed to cover the various raw and refined sugars made from sugarcane and palm juice together with their numerous products.

A large mass of valuable information on the different aspects of the industry has been collected from all parts of India by the central, provincial and state marketing officers and through the various Government departments and trade concerns connected with the subject. Special attention has been given to problems such as the utilisation of the cane crop for different purposes including the preparation of gur and khand and the quantitative and qualitative demand for various sugar products in respect of which reliable information has hitherto been unavailable. Seasonal price fluctuations and price differences due to variations in quality and problems connected with over-production and price fixations have also been considered in detail. Merchandising practices and costs of distribution on which the returns of the cultivator considerably depend have been examined keeping in view the interests of the producer as well as those of the trader and the consumer. The question of standardisation of grades and quality control as well as the possibilities of increased consumption and extension of markets for the various sugar products have also received due attention.

Grading of Gur.

With a view to adjudging the extent of financial benefits which are likely to accrue from the standardisation of qualities, grading of gur was undertaken on an experimental basis in the 1939-40 season. A Co-operative commission shop at Cawnpore was provisionally authorised to grade gur according to standard specifications which had been prepared with the help of the analysis results of a large number of typical samples—particularly keeping in view the quality characteristics recognised by the trade. Though the station could not run for more than two months as it started rather late in the season, the results achieved were quite encouraging and the packer was able to pay a premium of -|8|- to -|12|- per maund to the producers co-operative societies in Ghazipur and Ballia districts from whom most of the gur graded was purchased. Experimental grading of gur has also been undertaken at 6 centres in Madras, three of which are being run by co-operative sale societies which cater mostly for the demand from consumers co-operative stores.

Grading of Bura (Powder Sugar).

Great interest has also been shown in the grading of *bura* (powder sugar). The reason is that a considerably quantity of this product which is put on the market is prepared from sugar khand and gur mixed instead of from pure sugar or khand. Arrangements are being made for drawing up suitable grade specifications for the product with the help of a grant made by the Imperial Council of Agricultural Research. It would perhaps be possible to undertake the grading of this product early next year (1941).

The All-India Report is now under print and is expected to be issued early in 1941.

Proportion of Gate-cane to Rail-cane Crushed in Factories in India.

It would be of interests to see the statistics of the quantity of cane crushed by the factories in U. P., Bihar and other parts of India, brought to the factories by rail and by carts. The former is known as rail-cane and the latter as gate-cane. We give in Table no 22, in the Sugar Industry at a Glance the percentages of gate-cane to the total quality crushed by factories in the various provinces for the last five years. These estimates are based on information furnished by a fairly large number factories.

A glance at that table will show that there is a definitely increasing tendency for factories acquiring a larger percentage of gate-cane, which being fresh is richer in sucrose and more favourable to the mills for crushing. In Bombay practically all cane is gate-cane and in Madras the proportion has been increasing very rapidly. With the demarcation of the zones in future a still larger percentage of cane will be gate-cane for which, incidentally, the price was fixed 0-0-3 and 0-0-6 per maund higher than rail-cane depending upon the distances with effect from the 1938-39 crushing in U. P. and Bihar, up to 1939-40 season. The Governments of Bihar and United Provinces have removed this difference in price between rail cane and gate-cane, since the Commencement of the 1940-41 season.

Factories Prefer Gate-cane.

Generally, cane is transported to factories by carts within a radius of about 15 miles from the factories. Factories prefer gate-cane to rail-cane for various reasons including its freshness, uniformity of supply, less dependence on wagons which sometimes arrive late, and

less handling. We have no doubt that with improvements of roads and communications, larger and larger quantities of cane will be brought by carts and delivered to factories as gate-cane. Where gate-cane is not available the factories have to obtain their requirements of cane from long distances by rail. The average distance of cane brought by rail may be taken as 15 miles and the maximum at about 200 miles.

Problem of utilisation of molasses.

We have already referred to the problem of the raw material, viz. cane, and we may now turn our attention to the problem of by-products of the Industry and its utilisation.

Molasses and Bagasse are the two principal products of the industry and the seriousness of the problem now before the industry can be imagined from the fact that whereas seven years ago, when the Tariff Board reported, the price of molasses was Rs. 1/8/3 per maund, it has now come down to Rs. 0-2-0 per maund, and indeed its disposal has become a source of great difficulty for the factories. If molasses is thrown away by factories, for want of a market, it threatens to be a menace to the public health in the surrounding districts on account of its disagreeable smell and pollution of water if it is allowed to run into an adjacent water course. Molasses as a substance has value, but uses must be found for which it can be used e.g. manuring, cattle-feed, road making, utilisation for the manufacture of Power Alcohol, for the reclamation of *Usar* land, etc. Table no 34 in the "Sugar Industry at a Glance" shows the production of molasses in India for the last 8 years.

The import of molasses has now practically stopped. There has been small export since 1936-37. The price of molasses has fallen from 0-2-5 from 1930-31 to 0-15-0 in 1931-32, 0-4-4 in 1932-33, 0-5-0 in 1933-34, 0-2-6 in 1934-35, 0-4-0 in 1935-36, 0-1-7 in 1936-37, 0-1-6 in 1937-38 and to about 0-2-0 in 1938-39. In 1939-40, the price was a little higher.

In this connection, the Tariff Board of 1937 has also observed on page 104 of its report that if the large quantity of molasses which brings no return to the factories, but involves expenditure in their disposal, is taken into account, the average value for the whole of India would probably be not more than 8 pies per maund.

The Government of U. P. & Bihar Joint Molasses Committee.

The Governments of U. P. and Bihar appointed an expert Committee to devise ways and means for starting the manufacture of Power Alcohol from molasses and to report on the best method of mixing Power Alcohol with petrol and also to explore the possible uses of molasses and their practical application.

The Committee submitted its report to the Government of U. P. and Bihar in June 1938. The report was published in July 1939. A summary of its recommendations are included in the 1939 Annual (page 234-240).

The Government of U. P. passed an act for implementing the recommendations of that Committee for manufacture of Power Alcohol out of molasses and also published rules to be made in that Act. It is expected that the Act will come into force by May, 1941 and it will be possible to utilise a portion of the available molasses for the manufacture of Power Alcohol for admixture with petrol.

Utilisation of molasses for reclaiming Usar lands.

During the year 1938, the Government of U. P. appointed a Committee to report on the suitability of the methods advocated for the reclamation of Usar lands with special reference to the use of molasses etc. The Committee submitted its final report to the Government in December 1939. The Committee considered very carefully the feasibility of utilising molasses for reclamation of Usar land. It also critically examined all the data available in U. P., Bihar, Punjab, Madras, Bombay and Mysore. It came to the conclusion that molasses could be utilised with advantage for reclamation of Usar areas, but for the fact that the cultivators might find the cost of the treatment to be distinctly prohibitive. The majority of the members of Usar lands Reclamation Committee found it a little difficult to recommend this method for places other than those situated within about 10/12 miles of a sugar factory. The Committee also felt that there was need for further work both in the field and laboratory so that the question of molasses as a reclaiming and fertilising agent might be critically tested. In short, wherever the cost of treatment permits it, mixtures of molasses and press-mud in different proportions can be utilised in reclaiming alkali lands.

Madras Power Alcohol Committee.

We referred to the recommendation of the Madras Power Alcohol Committee in our last annual and observed that they had no hesitation

in recommending legislation to enforce mixing of Power Alcohol with petrol, which they considered was justifiable in common national interest.

During 1940, the report of the Director of Industries, Madras, was published, and it states that some doubt was expressed as to whether Power Alcohol, even taking the low rate of Rs. 7|- per ton of molasses, could compete with petrol at any point in this Province after paying the central excise duty. Eventually, the Government decided that the proposed legislation for the compulsory admixture of Power Alcohol with petrol for use as motor-fuel should be dropped, and if the question is to be re-opened at some date, a Committee representative of all the Provinces and the Government of India should be set up to consider the matter further, in the light of all the information which became available on the subject during the interval.

Power Alcohol in Mysore.

Ever since the establishment of a Distillery at Mandya, by the Mysore Sugar Co. Ltd. experiments have been conducted with regard to the suitability of 96 per cent alcohol, both by itself and as an admixture with petrol, as motor fuel. Early in 1939, the Distillery began the manufacture of absolute alcohol and as a result of the experience gained with the use of alcohol as motor fuel, the Mysore Power Alcohol Act was passed, making it compulsory for the admixture of 15 per cent of alcohol with all petrol sold in the State. This act came into force on the 1st October 1939, to begin with in the districts of Bangalore and Tumkur, and since that date all petrol sold in Bangalore and Tumkur districts contains 15 per cent alcohol produced at Mandya.

Precaution in using Power-Alcohol-Petrol mixture.

At the outset, the admixture received a mixed welcome from the petrol using public. There was prejudice in certain quarters against this innovation as is only common with all innovations, but this was removed in course of time. When alcohol petrol mixture is used, it is essential that the petrol tanks of the vehicle and of the pumps out of which the mixture is drawn should be thoroughly cleaned as, otherwise, alcohol being a solvent would take the dust along with it and it may cause starting trouble. Further, care should be taken to see that no water enters the petrol tank since petrol and alcohol in the mixture become separated if water gets into it.

Power Alcohol industry is a great national industry and the value of Power Alcohol in times of war, when supply of petrol is liable to become short, cannot be over-emphasised. To India, especially, the power alcohol industry has great potentialities. At present the huge quantity of molasses obtained from the sugar industry is not only going to waste, but its disposal has become a serious problem. The most profitable use to which molasses can be put is to convert it into alcohol and use it as motor fuel.

The annual consumption of petrol in the Mysore State is about thirty lakhs of gallons and on the basis of a 15 per cent mixture, there is scope for absorbing about 4,500,00 gallons of alcohol. This would mean that the import of petrol into the State can be reduced by this quantity and the money that would have gone outside the State would remain within the State itself. It is the desire of the Mysore Sugar Company to be able to supply the entire quantity of alcohol required for admixture with petrol for sale throughout the State and it hopes to do so as soon as possible.

To the progressive Mysore State goes the credit of being the pioneer in this field in the whole of India. It is understood that U. P. Bihar and Hyderabad will be producing power-Alcohol, by the next year.

Utilisation of bagasse produced in factories.

In our last annual we have dealt at a considerable length with the problem of the utilisation of bagasse produced in factories. The question was further considered at the 13th Meeting of the Sugar Committee held in 1941 to which a reference has been made in the earlier pages.

A glance at the statistics of imports of packing paper and boards will show that there exists a market for wrapping paper and board in India, a portion of which can be suitably exploited, as bagasse may be utilised for same for the manufacture of these.

During the year Mr. M. P. Bhargava, Officer-in-Charge of the Paper Section, Forest Research Institute, Dehra Dun carried on investigations on the production of insulation boards straw boards and wrapping papers from bagasse. A final report was also submitted to the Imperial Council of Agricultural Research. It is understood that satisfactory qualities of insulation boards, possessing thermal conductivity, sound absorption and strength characteristics comparable with those of imported insulation boards, have been successfully pre-

pared in the laboratories of the Forest Research Institute. Satisfactory qualities of straw-boards and wrapping papers have also been prepared from bagasse at the Forest Research Institute. It is understood that the demand for insulation and pressed boards in this country is not very large at present, though it has been increasing. It appears, therefore, that adequate supplies of surplus bagasse would be available for the manufacture of these boards. It is said, however, that sufficient supplies of bagasse at economic rates may not be available for the manufacture of straw-boards and wrapping papers. It is hoped that the Imperial Council of Agriculture will soon publish the report, so that the commercial possibilities of utilising bagasse for the manufacture of insulation boards etc. may be known to the public.

Particularly, since the outbreak of the war, there is greater chance of success in this direction and we hope that the industrialists will take advantage of the same.

Problem of marketing sugar.

We have referred in detail already to the pressing problems now facing the industry, the most important of which is that of marketing of sugar in a manner which would safeguard the interest of the industry and avoid fluctuations in the price of sugar to as great an extent as possible. We have already seen that the annual production of sugar in India has exceeded the present annual estimated consumption of sugar and judging from the present circumstances, it is not at all probable that this embarrassing situation will correct itself before 1942 at the earliest.

The problem becomes more serious, because more than 80 per cent of the sugar produced in India, is produced in the U. P. and Bihar and this production is far in excess of the consumption of these Provinces which may be estimated at only about 20 per cent, and this situation necessitates scientific marketing of sugar in the various parts of the country in a manner which would avoid over-lapping, which would eliminate internal unrestrained competition, which would minimise freight charges with a well ordered system of distribution from various production centres and the nearest consuming markets and would also eliminate import of foreign sugar at the ports where it can compete more easily than in the hinterland, with a view to preserve the Indian market entirely for indigenous sugar. It is very necessary to arrange for markets of sugar in territories adjacent to

India, viz. Tibet, Afghanistan*, Nepal, Ceylon, so that a portion of the production may find outlet in such areas and relieve the internal pressure to some extent.

We have given a table showing the production of sugar including factory sugar in each Province including the production of Khandsari sugar and sugar manufactured from Gur for the last 9 years, in the "Sugar Industry at a Glance". We invite a perusal of that table, as it will be very instructive.

Carry-over of 2 lacs tons of sugar necessary.

For ensuring against any short production of sugar and the possibility of a deficit of supplies, we feel that it is essential for the Industry to plan its production for 2, or 3 years ahead in such a manner that there is roughly a carryover of about 2 lacs tons at the end of every season. We have seen that during the last two seasons the carryover was only normal and during the last season there has been a very huge carryover of about 4 lacs tons. Such abnormally large carryover has resulted in serious difficulties in regard to locking up of finance, storage, deterioration of quality etc.

We feel that the production of sugar in the country should be so regulated as would leave a normal carryover varying between $1\frac{1}{2}$ to 2 lacs tons at the end of each season. The production of cane should also be regulated evenly with this end in view. It will be of interest to see the figures of production, consumption and per capita consumption of sugar in the various provinces of India for the years 1935-36 (November to October), 1936-37 (November to October) and 1937-38 (November to October.), in the Sugar Industry at a Glance (vide Table No. 33).

Production, Consumption and percapita consumption of sugar by Provinces from 1935 to 1938

A glance at Table no 33, referred to above, will show that U. P. and Bihar which produced over 75 per cent of the total sugar in India, consume only about 20 per cent of their total production while Bombay and Punjab which produce only 7 per cent consume over 35 per cent. The *per capita* consumption varies widely in the provinces being highest in Bombay and lowest in Indian States. The variation in the per capita consumption is due to several factors. The province

*In March, 1941, the E. I. & N. W. Ry reduced freights for facilitating exports to Afghanistan & Iran. It is understood that Afghanistan proposes to establish a sugar factory in Afghanistan for meeting its needs of sugar.

which consumes less sugar is consuming relatively more gur and vice versa. The consumption of sugar also depends on the strength of urban population in the province since the agriculturists consume very little sugar. The difference in tastes and habits of the people would also account for a wide variation in the provincial *per capita* figures for consumption, for instance the traditional liking for hot curries and sour stuff like tamarind, curds etc in Madras and the comparative indifference to sweets is reflected in their per capita consumption of sugar being as low as 3.9 lbs. These estimates of consumption, it must be observed are in the nature as estimates, vide Indian Trade Journal Supplement, dated 30th May, 1940.

The following table gives the imports and exports of sugar by rail and river in the various provinces of India for the year 1936-37 and 1937-38.

TABLE NO. 12

Imports and Exports of Sugar for Provinces and States according to the Rail and River-borne Trade Returns.

Provinces (Including States)	Period November/October			
	1936-37		1937-38	
	Imports by Inland Trade Tons	Exports by Inland Trade Tons	Imports by Inland Trade Tons	Exports by Inland Trade Tons
Punjab	... (a) 249,613	(a) 2,641	179,830	4,645
United Provinces	... 7,871	576,361	4,300	552,300
Bihar	... (b) 13,922	(b) 260,347	19,550	245,100
Bengal	... 173,075	17,353	177,615	17,204
Madras	... 97,411	26,747	94,365	30,110
Bombay	... 200,608	47,814	212,644	46,106
Assam	... 16,144	75	18,183	90
Central Provinces and Berar	... 41,713	338	43,958	296
Sind and British Beluchistan	... 66,757	28,500	56,701	19,431
Orissa	7,200	870
North-West Frontier Province	23,500	1,530
Delhi	9,980	52
Mysore	... 1,122	15,669	2,187	20,028
Hyderabad	... 19,325	79	20,660	24
Kashmir	... 2,629	...	2,327	2
Central India	... 29,335	358	22,521	271
Rajputna	... 56,821	63	43,107	115

(a) Includes North-West Frontier Province and Delhi.

(b) Includes Orissa.

Review of the working of The Indian Sugar Syndicate in 1939-40.

The season 1939-40 witnessed a thorough reorientation of the Indian Sugar Syndicate, the sole marketing organisation for the U. P. and Bihar mills. We have already referred in detail in the previous issues of the Annual to the various phases of its existence. It was, as will be remembered, brought into being in July, 1937, as a voluntary organisation for controlling sugar sales on behalf of its members, and consisted of about 92 sugar mills from all over India. In 1938, the Governments of the U. P. and Bihar recognised the Syndicate as the sole marketing organisation for the mills working in both the provinces, and made it incumbent on all mills within their jurisdiction to become its members. After this recognition, outside mills resigned from the Syndicate, and its activities were confined to look after marketing of the output of the U. P. and Bihar mills. In the previous issues of the Annual we have also had occasion to refer to the various services that it had rendered during the three years of its existence, and the success that it had achieved in evolving an efficient machinery for the marketing of sugar.

During the year under review, conditions unfortunately took a serious turn. The difference in the point of view of the two Provincial Governments on the one hand and of the Syndicate on the other, in regard primarily to cane prices gave rise to considerable amount of controversy, each putting on the other the responsibility for high sugar prices that prevailed during the season. As the readers of the Annual would be aware, sugar prices during the 1938-39 season touched very high levels due to shortage in the indigenous production. The serious efforts then made by the Syndicate to bring them down had little effect in the market. The Provincial Governments nevertheless, tried to fix the responsibility for the increase in prices on the shoulders of the Syndicate.

In the meantime, a sub-committee appointed by the Joint Sugar Control Board examined the question of cane prices and recommended a sliding scale of cane and sugar prices which was adopted by the Governments with slight modifications. (See "Sugar Industry at a Glance"). The Syndicate felt that this scale would not do even justice to the industry and would give to the cultivator more than was his due. The Syndicate never reconciled itself to the scale and continued to protest against its continuance, while the Governments showed no inclination to abandon it. This was, therefore, the bone of contention between the Syndicate and the two Governments.

In June 1940, the Governments of India convened an All-India Sugar Conference to consider the urgent problems of the Sugar Industry and suggest the best course of solving them. The constitution and functions of the Syndicate also came in for review on the occasion. While opening the conference, the Hon'ble Commerce Member to the Government of India, explained the views of the Central Government on the subject. He doubted the utility of an organisation like the Syndicate, especially in the case of a protected industry. The consensus of opinion at the conference cannot be said to have been in favour of the Syndicate.

In the midst of these circumstances, the industry was shocked to hear of the announcement of the Provincial Governments of the U. P. and Bihar of rescinding the rule under which they had made it obligatory for all factories in the two provinces to remain members of the Syndicate. The withdrawal of recognition added to the problems of the industry, which was already finding it difficult to keep its head above water. The expectation of a carryover of 4 lakh tons and of a bumper crop during the next season had already wrought havoc in the market. The withdrawal of Government recognition coming as it did, at a very inopportune moment made confusion worse confounded. Sugar prices dropped to an uneconomic level and the members tried to clear away their stocks unmindful of the Syndicate's rules and regulations. The Syndicate, however, decided to continue itself on a voluntary basis. But because of numerous difficulties standing on its way, it soon sought for Government help once again. A deputation of the Syndicate consisting of Lala Karam Chand Thapar, Mr. D. R. Narang, Mr. C. O'Malley, Sardar Kripal Singh, Lala Shri Ram, Seth Haji Abdul Rahim Oosman, Raja Narayanlal Pitty and Mr. Gurusharanlal waited on His Excellency the Governor of U. P. on July 28, at Allahabad, and a similar deputation also waited on His Excellency the Governor of Bihar on August 2, at Ranchi, and in both the cases an appeal was made to the Governments to come to the help of the industry. Their efforts met with success and the Governments agreed to restore recognition to the Syndicate subject to certain conditions. The *Communique* which was issued by the Governments of U. P. and Bihar on August 3, 1940 is given in the "Sugar Industry at a Glance".

The Government concluded with the hope that with the restoration of the recognition of the Syndicate and its re-organisation on the above lines, the sugar market will speedily return to its normal working conditions.

The proposals of the Government were examined by the Board of Directors of the Syndicate and a comprehensive resolution indicating their willingness to accept the proposals subject to certain amendments of a detailed character, was adopted. The resolution, the full text of which is given below, was subsequently ratified by an informal general meeting of the Syndicate held at Cawnpore on August 15:—

“This Board records that there is a great divergence of views on the question of any interference by the Government in trade. In view of such divergence, the Board realises the difficulties in getting the Articles of Association amended as desired by the Governments of U. P. and Bihar. The Board, however, feels that there seems to be unanimity of feeling in all sections of the Sugar Industry that any scheme which helps the industry in escaping the serious loss which is facing it at the present moment and also which helps reduction of existing surplus stocks should be given a fair chance irrespective of any disagreement on the question of Government interference.

“The Board have thus been able to achieve unanimity on the proposals laid down in the Government communique dated 3rd August 1940 subject to the following conditions:—

- (1) That the members of the Syndicate will not be required to produce during the season 1940-41 under any circumstances and irrespective of the quantity of consumption, a quantity that might ultimately result in a carry-over of more than 4 lacs tons. Like-wise in determining the quantity to be produced in the season 1941-42 the members of the Syndicate will not be required to produce a quantity that might ultimately result in a carry-over of more than 2 lacs tons.

It is clearly emphasised that the industry is not in a position to carry a burden of stocks of more than 4 lacs tons at the commencement of the 1941-42 season and it also emphasises that unless the stock is reduced to a level of 2 lacs tons at the commencement of the season 1942-43 it will be impossible for the industry to run economically. The crushing seasons of 1940-41 and 1941-42 therefore, will have to be strictly regulated with a view to the attainment of the above object. The crushing licence will be made to make due provision with regard to the crushing days in the light of the object to be achieved.

- (2) The Sugar Commission while exercising its discretion in fixing sale prices of sugar shall not call upon the Syndicate

to fix the said prices under the cost of production worked out as under:—

(a) The cost of manufacture is to be calculated according to the scale of Mr. R. C. Srivastava. In the event of the working days of the season falling short of 100 days, the cost of production should go up and in this connection, mention has been made in one of the Sugar Control Board Meetings that if the working days are 80 in a season, the cost of production will be Rs. 2|12|- per maund.

(b) Add to the cost of manufacture as above calculated the following charges:—

Transport charges	- 5 - annas as per Mr. R. C. Srivastava's figures
Co-operative Society's commission	Such rate as may be fixed
Extra charges on account of war conditions	Such as will be determined by the Commission in consultation with the Syndicate.
Profit	- 12 - annas under normal conditions.

N. B. (The attention of the Government is also drawn to the extra interest, insurance charges and godown charges and loss due to deterioration of quality that the industry is put to).

"The Board further request that Government may not insist on the election of the Chairman of the Syndicate being subject to the approval of the Government.

"Resolved that the Solicitors of the Syndicate be instructed to prepare the draft of amendments to the Syndicate's Memorandum and Articles of Association of the Syndicate to give effect to the intentions of the foregoing resolutions."

The two Governments heard with pleasure of the acceptance by the Syndicate of the proposals made by them for the reorganisation of the Syndicate as a condition of recognition, and in furtherance of those proposals, decided to appoint a Sugar Commission at once. The Commission consists of Mr. J. E. Pedley, C.I.E., M.C., I.C.S., as Chairman, and the Cane Commissioners of the two Provinces as members. The Commission will now be the final authority, subject to Government

control, on all matters connected with the production and sale of sugar as well as other matters regarding cane prices, etc., which are referred to it by the Governments of Bihar and the United Provinces.

In view of the heavy carryover of unsold stocks, the Government felt that it was imperative that a large proportion of these stocks should be cleared before the commencement of the next crushing season. Owing to the high cost at which these stocks were produced an adequate clearance was not possible without financial assistance to the industry to bring down the selling price to a price which could be related to the probable selling price of next season's production. The Governments of Bihar and the United Provinces accordingly decided, with the consent and help of the Government of India, to assist the industry by assuming immediate responsibility for payment to the Government of India of Re. 1|- of the Excise Duty* payable on each maund of sugar manufactured during the last season and at present unsold. This took effect from August 25, 1940.

Reduction in price of Sugar.

An important meeting of the Board of Directors of the Syndicate was held at Lucknow on August 25, 1940, at which the Provincial Governments' decision to take immediate responsibility for the payment to the Government of India of Re. 1|- per maund excise duty on unsold balance of sugar as on August 25, 1940, was considered. The Directors of the Syndicate noted with satisfaction Governments' willingness to give temporary assistance to the industry at a critical stage of its existence, and, in response to their wishes, reduced the selling rates then in force by annas 14 per maund with immediate effect. At this meeting, they also decided that from November 1, 1940, price of sugar would be fixed at Rs. 8|12|- per maund, at which figure, it would rule till such time as all the sugar produced during 1939-40 season is sold out. As regards the price of the next season sugar, they announced that it would not be less than Rs. 9|2|- per maund.

Heavy stocks may be liquidated by 1942.

The difficulties of the industry caused by the existence of unusually heavy stocks are not likely to be solved until the end of the crushing season of 1941-42. In consequence, arrangements are being made for 1940-41 for converting into *gur*, *rab* or *Khandsari* sugar a considerably greater proportion of the cane crop than was so converted in previous seasons. Further, a scheme for restricting areas under cane in the

*The Governments will recover this amount from the factories in 1941-42 and 1942-43.

neighbourhood of sugar factories is also being formulated for the 1941 sowing season.

Membership and sale by quotas.

During the crushing season 1939-40, the Syndicate had 107 factories as its members of which only 100 operated during the season, 68 in the U. P., and 32 in Bihar. The total manufacture of sugar by members came to about 2,67,00,000 maunds as compared to 1,33,00,000 maunds for 1938-39. The total stock of sugar pooled by members was the same as the total quantity manufactured less the amount earmarked for the requirements and manufacture of confectionery etc. Till April 30, 1940, the sale of sugar was made as in previous years in accordance with the system of quotas covering definite periods. Factories sold their sugar themselves at rates fixed by the Syndicate. It was, however, noticed that a number of factories during the season have sold at rates below the Syndicate's selling rates. Repeated warnings were given to them not to have recourse to such tactics and effective steps were taken from time to time.

The balance of stocks with the member factories at the end of the season 1938-39 totalled about 6,500 tons and members were given the option of repurchasing their share of unsold quantity at the Syndicate's selling rates, namely, 6 pies above the basic prices. As it was felt that stocks of Indian sugar in the market were very meagre, the Syndicate decided as early as December 4, 1939, to put as much sugar in the market as possible. Accordingly, the Directors decided to release all sugar manufactured till the 15th January, 1940, as the First Selling order. Basic prices, as a temporary measure, were fixed at Rs. 2|8|- above the basic prices of the similar quality of sugar produced in the last season, the rise being due to the abnormal increase in cane prices*, and increase in cost of production due to war.

At an extra-ordinary general meeting of the Syndicate held on November 23, 1939, to fix the basis for computing the prices to be charged to the Syndicate for sugar to be sold to it by the members during the season, the Board of the Syndicate was authorised to fix the basis for the fixation of basic prices. Subsequently on December 4, the Syndicate decided to fix sugar prices on the basis of Nawabganj D 24 for the season, the price for which was fixed at Rs. 12|- per maund. The selling prices were to be one anna above the basic prices.

*Cane prices till the first week of December, 1939, ruled at -|8|9 per maund, excluding co-operative societies' commission and the cane cess.

The period earmarked for disposing of the quantities issued as the First Selling Order, which came to about 70,60,000 maunds, had to be extended from time to time as this amount could not be easily absorbed in the market. Even as late as August 1940, there were certain factories which were not able to dispose of their share of the First Selling Order. The Second Selling Order was released on May 20, 1940, and was 20 per cent of the balance of manufacture from January 16 to April 12, amounting to 33 lakh maunds. The sales, unfortunately were very slow, stocks sold by the middle of August being only 92 lakh maunds.

The first two selling orders comprised 45 per cent of the total manufacture of the factories till April 12. After the price reduction announced on August 25, the tone of the market improved and there was greater demand for sugar. The recognition of the Syndicate had imparted a steady influence in the market. The Syndicate released the Third Selling Order on September 7, which consisted of 15 per cent of the production till April 12. The quota came to 33,39,000 maunds. The conditions for sale effected were similar to those of the first two quotas.

The following statement shows the details of the quotas released by the Syndicate till 22nd January, 1941.

Table showing the quotas released by the Syndicate during 1939-40 & 1940-41 (in respect of sugar manufactured during season 1939-40.)

Serial No.	Date of release	Quantity released.	Conditions
1	4 12 1939	Production from the start of season to 15th January, 1940 - totalling 70,60,000 maunds.	Ready sales. Selling -1/- above Basic rate.
2	20 5 1940	20% of the balance of production from 16-1-40 to 12-4-40 totalling Mds. 33,00,000.	do.
3	7 9 1940	15% of the production upto 12-4-40 totalling Mds. 35,39,000.	do.
4	5 10 1940	1% of the production upto 12-4-40 totalling Mds. 2,36,000.	do.
5	12 10 1940	5% of the production upto 12-4-40 totalling Mds. 11,83,000.	do.
6	22 10 1940	do.	do.
7	28 10 1940	do.	Ready sales. Selling rate -2/- above the current selling rates from 1st November, 1940
8	7 1 1941	do.	do.
9	22 1 1941	do.	do.

*Quota released by orders of Sugar Commission, U. P. & Behar.

On February 29, when the budget proposals of the Government of India were announced, it was found that the excise duty on sugar had been increased by Re. 1|- per cwt. or -|11|9 per maund from 1st March, 1940. In the usual course, this should have been followed by an increase in sugar prices. But the Syndicate did not have recourse to such increase. It, on the other hand, decided that the industry should bear the loss involved. The Provincial Governments also agreed to amend the sliding scale by reducing cane prices by nine pies per maund and this gave a certain amount of relief to the mills. Side by side, efforts were also made to persuade the Government of India to exempt the stocks produced before March 1, 1940, from the operation of the excise duty. The Syndicate's efforts in that direction met with success and the industry got relief to the extent of Rs. 70,00,000, the share of U. P. and Bihar mills being Rs. 63,00,000.

On the occasion of the third Annual General Meeting of the Syndicate held at Lucknow on April 3, 1940, several decisions of a far reaching nature were taken. By that time, it was evident that while sugar production during the season was much in excess of the normal requirements of the country, a bumper crop was lying ahead of it. It was at one stage even considered necessary to stop crushing and thus avoid losses. But as this course involved unbearable losses to the growers, the Syndicate gave up the proposal. The Syndicate, therefore, considered it essential to so regulate the production as to minimise the losses to factories. It was decided to fix the basic prices of sugar to be manufactured after April 10, (ultimately the date was changed to April 12) at Rs. 3|6|- per maund below the original prices; and the Provincial Governments were requested to bring down the prices of cane to be purchased after that date. The sugar to be produced out of this low-priced cane was to be treated separately and was only to be released after all the sugar manufactured before that date had gone into the market. A satisfactory arrangement was reached with the two Governments, and, the Syndicate on its part, gave an assurance to crush as much cane as was available.

Direct sales by Syndicate.

Two more important decisions to which we would refer later on were taken at this meeting. The Syndicate decided to take over direct sales from April 10, 1940. It also decided to approach the Government of India to negotiate with His Majesty's Government in Great Britain to purchase 2 lakhs tons of Syndicate sugar at reduced prices and also to impose a ban on the import of Java Sugar, which was seriously competing with Indian Sugar.

As the year advanced, conditions in the industry deteriorate. Withdrawal of Government recognition and failure of the contemplated export deal had added to its difficulties. The banks who had given loans to the factories on the security of their sugar were not willing to advance further loans for financing their off-season needs. On the other hand, they even threatened to have recourse to forced selling to realise their dues. In accordance with their wishes, the Syndicate on July 22, 1940, decided to reduce the basic prices by Rs. 2|8|- per maund. This, it was contemplated, would lead to the movement of sugar and reduce the stocks with the factories.

Further reduction by annas 14 per maund was made on August 25, after the local Governments' decision to take immediate responsibility for the payment to the Government of India of Re. 1|- per maund excise duty on the unsold stocks of the Syndicate sugar as on August 25, was announced. This reduction was in response to the willingness on the part of the Government of India to defer realisation of excise duty to the extent of Re. 1|- per maund. It was contemplated that such a course would enable the Syndicate mills to sell sugar at a cheaper price than the one then prevailing and thereby reduce the stocks in their hands.

In addition to these price reductions, the Syndicate also allowed in the middle of the season a rebate on sales for despatch to port areas, where severe competition from Java was felt. The rebate allowed on despatches to Bombay, Karachi, Madras, Cochin and Calicut was fixed at -|10|- per maund on the current selling rates, and at -|6|- per maund on stocks despatched to Calcutta and Chittagong. This came into force from April 24, remaining in force till May 18, 1940.

New method of effecting sales of sugar adopted.

By far the most important decision taken at the Annual General Meeting related to direct selling. It had for a long time been felt that the future of the industry to a great extent depended on the setting up of a suitable organisation for marketing sugar—an organisation which would control the proper distribution and despatch of the commodity to the various parts of the country according to market requirements at different times. Direct sales not only stop the waste involved in cross haulage on account of the defective system of distribution, but are also calculated to minimise the activities of speculators, and, in a season of over-production, serve in reducing the chances of

the individual members resorting to malpractices. It was also felt at that time that direct selling would be of immense help to the industry at the time of crisis through which it was then passing. It was intended that the scheme of direct selling would be brought into operation from April 10, 1940, but its commencement had to be postponed till May 1, 1940, as the necessary arrangements could not be effected by that date. The sales were to be conducted by a sales committee composed of the representatives of the different groups in the Syndicate. The sale committee was empowered to dispose of the unsold quantity of sugar with Syndicate members by directly calling for offers from selling agents and accepting them on their behalf. As regards the working of the scheme, the existing selling organisations of the members are utilised as far as possible. The acceptance of the offers is communicated to the selling agents, who are responsible for the fulfilment of the contract, payment of all charges in that connection and settlement of claims arising from them. The terms of agency between the selling agents and the factories remain absolutely unchanged excepting that the Syndicate instead of the factories, accepts both the 'options' and 'firm offers' made by the selling agents. The Syndicate also advises the agents regarding selling rates for all qualities of sugar produced by the factories concerned. The selling rate include agents' commission or brokerage, but are not subject to any reduction, discount or commission of any description whatsoever. Selling rates announced remain in force until cancelled or substituted by others and alterations can be made at any time without warning. It is gratifying to note that the scheme is being worked out efficiently and has proved its merit.

Proportionate sales of Member's sugar.

Through the season, the Syndicate laid considerable stress on ensuring that the sales of all factories were made in definite proportion to their production. The First Selling Order, which consisted of all the sugar manufactured till January 15, had brought about considerable disparity in the sales of different factories, those starting earlier having a definite advantage over those who commenced crushing later in the season. It was noticed that while some factories had sold as much as 52 per cent of their total manufactures till April 12, there were others who had not even sold about 10 per cent of their production till April 12, 1940. In order to bring the sales of all the backward factories to the parity of those who had made larger sales, the factories were divided into various geographical groups and in each group, the factories which had made highest sales were asked to stop until other

factories had come to their level. The factories were divided into 6 groups, namely, South Bihar, North Bihar, Gorakhpur, Basti-Gonda, Meerut & Midwestern U. P., and R. K. R. The limit of 33 per cent was fixed in the case of factories in North Bihar, Gorakhpur and Basti-Gonda groups and of 45 per cent in the case of factories belonging to South Bihar, Mid-Western U. P. and R. K. R. groups. To avoid delay, sales were effected through local offices at Bombay, Cawnpore, and Muzaffarnagar under the direction of local committees, which were specially set up for the purpose and were empowered to accept offers regarding sugar of the factories, the sale of which they were required to direct in accordance with instructions issued from the head-office. In cases of necessity, offers made by selling agents in respect of sugars of factories to which they did not belong, were also accepted.

This scheme worked successfully and the heavy stocks with the backward factories were cleared away by the end of August, 1940. Therefore when on September 7, the Third Selling Order was allotted, no provision of this type was made and all factories were given a uniform quota of 15 per cent of their production upto April 12, 1940.

Export of Sugar.

Another matter which occupied the attention of the Syndicate during the year related to the export of sugar. The heavy surplus stocks of this season and the expected bumper crop of the next, pressed for effective solution throughout the season. In order to relieve the pressure of heavy carryover, it was decided at the Annual General Meeting to offer 2 lakh tons of sugar to His Majesty's Government at Rs. 5|- permaund ex-port. The Government of India was also asked to lift the ban imposed by the International Sugar Agreement on exports of Indian sugar by sea. While Government did not think it proper to remove the export ban, they succeeded in persuading His Majesty's Government to agree to the purchase of Indian sugar. The price offered for this sugar was, however, very low, namely, Rs. 4|4|- per maund ex-port. The Syndicate, even then decided to clear away 30 lakhs maunds of sugar at this price. It was also expected that the railway would give some concession on this sugar sent to the ports and the loss of the industry would thus be reduced. However, fresh difficulties soon cropped up. The banks with whom sugar was mortgaged did not permit its sale at the reduced price without further margins, which the mills were not in a position to provide. Ultimately, the scheme had to be postponed for the time being.

Imports of sugar restricted.

While the Syndicate failed in effecting this export deal, it succeeded in convincing the Government of India of putting restriction on the imports of foreign sugar into India. The Netherlands East Indies Government, it is gratifying to note, have themselves volunteered to restrict sugar exports to India during the financial year to 35,000 tons.

All-India character of the Syndicate envisaged.

With the reorganisation contemplated in the joint *communiqué* of August 3, the Syndicate entered into a new phase of its existence. Its recognition as the accredited and representative selling organisation of the industry in the two provinces has thus been placed beyond the shadow of a doubt. Its working during the succeeding years will, therefore, be watched with keen interest by those connected with the industry and there is every reason to believe that if it proves successful, it will soon be put on all-India footing, effecting sale of sugar manufactured in all factories in India. That consummation is yet to be reached, but as things are shaping today, it is hoped it will not be long delayed.

Bureau of Sugar Standards.

With effect from the 1st of April, 1940, the Bureau of Sugar Standards has become an integral part of the Imperial Institute of Sugar Technology.

The Bureau continues to

- (1) Prepare and supply the Indian Sugar Standards
- (2) publish an annual review dealing with the quality of Indian sugars and giving comparative figures for competitive foreign sugars.
- (3) maintain a Museum of samples of sugar and sugar products.

The standard sets are available for sale each year from July 1st but they come into force from November 1st and remain valid till October 31st of the following year.

Review of Quality of Sugar produced in India during the Season 1939-40.

A 'Review of the quality of sugar produced by Central Sugar Factories & Refineries in India during the year 1939-40' was published

by the Director, Imperial Institute of Sugar Technology, Cawnpore on 4th July, 1940 in the Indian Trade Journal.

The total number of samples analysed for quality during the year was 252 as against 231 last year. As in previous years the samples continued to bear a very large number of different quality designations even for the same class of sugars, a practice which must be discouraged by Indian Sugar Factories for effecting uniformity in the quality of Indian sugars. Eight factories as against one of last year denoted their quality in terms of I.S.S. Numbers. The different grades of sugars produced by Indian factories during the season 1939-40 with comparative figures for the last season are given in the following table.

Serial No.	Particulars	No. of Factories	Percentage 1939-40	Percentage 1938-39
1.	Factories making One grade only	30	27.27	26.26
2.	do Two grades only	41	37.27	34.34
3.	do Three do	30	27.27	26.26
4.	do Four do	7	6.37	7.08
5.	do Five do	2	1.82	6.06
	Total	110	100.00	100.00

From the above table it will be observed that while there has been no reduction in the production of too many grades of sugars, the percentage of factories producing one, two and three grades has increased during the season 1939-40.

The majority of samples received this year were also mixtures of varying grain sizes. The big and the medium grain sugars lacked brilliance and contained twin, joint and mixed crystals.

The figures in the review also show that the quality in respect of first crystal sugars has improved over last year but the general grain size has been slightly smaller than that of last year's sugars. A fairly good number of Superior Indian Sugars compare favourably with the Java Whites.

The Indian Sugar Standards provide a common scale for assessing sugar quality in place of numerous quality designations at present in use which give rise to confusion. Sugar sales and contracts based on the Indian Sugar Standard Numbers not only facilitate business but avoid disputes. The sooner therefore the Indian Sugar Standards are adopted by the Indian Sugar Industry the better.

Co-operation of Railways.

The rapid and phenomenal development of the Sugar Industry in this country called for an effective co-operation on the part of Railways, Inland Steamer Services and Ocean Lines, in order to find markets at distant ports and internal centres, and we must observe that such co-operation has been forthcoming from the various Transport Agencies. Facilities in the shape of Sidings, and handling of this traffic and Concessions in rates, where such was possible, were given. The Railway in India have realised the necessity of reducing freight rates on sugar to the ports and other internal markets for the mutual benefit of the Industry and themselves. The extent to which Railways have benefited from the Sugar Industry during the last five years can be seen in the relevant tables to Sugar and Sugarcane movement given in the "Sugar Industry at a Glance".

While the attitude of the Railway and Steamer services has been generally helpful in permitting concessions in rates, there still remains a lot to be done. For instance, the N. W. Railway has yet to accept the lead given by various other Railways for the benefit of the transport of Sugar and Molasses produced in the factories situated on their line.

Railway Freights on Sugar.

The attitude of the Railway Companies and Inland Steamer Services admittedly play a very important part in the development of industries in a country and they can do a lot more than any other organisation in implementing the policy adopted by the Government from time to time, of advancing and stabilising industrial development of the country. The freight rates to various ports such as Bombay, Karachi, Madras, Coconada, Vizagapatam, Amedabad and Calcutta from the factories in Bihar and United Provinces still remain at a higher level and the replacement of these rates by a flat rate of annas 0-13-0 per maund to these destinations is once again urged.

We have to observe that the East Indian Railway in conjunction with the B. & N. W. Railway, made further reductions in the rates from certain Sugar factories on the B. & N. W. Railway to Howrah from 1. 11. 1939. These reductions amounted to about six pies per maund.

The earning of the Railway from the traffic of Sugar and Sugarcane was about Rs. 2,15,91,000 in 1938-39 as compared with Rs. 1,29,00,000 in 1932-33. The total tonnage of sugar carried was 2,236,000 tons in 1938-39 as compared with 1,057,000 tons in 1932-33.

Facilities for transport to Rangoon.

Sugar is now being carried from the E. I., B. & N. W. and R. & K. Railway to Howrah and from Howrah to Rangoon and Akyab per steamer on through railway receipts; the charges from Howrah (Riverside Shed) to Rangoon being As. 0-8-6 per maund and to Akyab As. 0-8-3 per maund. The steamer charge is inclusive of all charges for transporting goods from Howrah on Board the Steamers, Port Dues, cost of Bill of Lading, fees and all other incidental expenses etc. at Calcutta. A table in the "Sugar Industry at a Glance" indicates the current rates on Sugar from a few factories located on the East Indian Railway and the B. & N. W. Railway to Bombay, Karachi, Madras, Vizagapatam, Coconada, Howrah, Rangoon, Ahmedabad and Tuticorin.

A procedure in the booking of Sugar regularly adopted by some factories, is the re-booking system managed by the Joint Steamer Companies in conjunction with the B. & N. W. Rly. via the riverine stations Semaria Steamer Ghat and Paleza Steamer Ghat, the former being used by factories in the Muzaffarpur-Samastipur—Sakri area and the latter by the Savan factories and those farther to the North West. The principal markets of East Bengal, Assam, Cachar and the Delta or Sunderbunds area are served in this way, also many centres where alternative means of transport are not available. The route is also used in booking to Calcutta, to the Godowns at Kantapukur and to Coastal Ports in through booking with the Ocean Lines. Such traffic is generally booked under "Paid" documents to the Companies' Agents at Semaria and Paleza where re-booking to the point of destination is arranged under "To pay" documents. The facilities appear to be adequate, the handling at Semaria and Paleza being undertaken by the Steamer Companies.

We trust the railways will continue to view sympathetically as they have done in the past, the question of quotation of suitable flat rates for helping the Industry which, passing as it does through a critical time, needs such help all the more*. We suggest that suitable adjustment in rates to all internal points in the length and breadth of India to enable sugar to move freely is a sound commercial proposition

*Freights on sugar to Iran & Afghanistan were appreciably reduced from March, 1941, by the E. I. & N. W. Railways. It is hoped that this will stimulate exports to some extent to these countries.

in the interests of the Industry and Railway revenues as a whole, and the Railway should assist the industry in this respect.

Railway Freight on Sugarcane.

The remarks that we have made with regard to freight on Sugar apply with equal force to freight on Sugarcane and Molasses too.

The East Indian Railway quotes lump-sum wagon rates for Sugarcane to benefit sugar factories at the rate of As. 0-4-0 per wagon mile on an assumed average load of 480 maunds. During the year 1939, the E. I. Railway extended their lump-sum wagon rates for Sugarcane to several junction stations such as *via* Naihati, *via* Mokamehghat, *via* Bhagalpur, *via* Arrah and *via* Sasaram for traffic to Sugar Mills on the adjoining Railways.

We consider that there is still scope for a further reduction in the Sugarcane rates by the Railway notifying the charge on the minimum permissible basis or even going lower where warranted, with the Government of India's sanction. The difference between the price of gate cane and railway cane is half an anna per maund* and if the railways could see their way to reducing further their special rates of freight for cane transported from long distances, it will enable the factories to extend their crushing season and thus help not only long lead movements over railways, but also the trade generally.

Expenditure on Research and Investigation benefits all.

We have already referred to the paramount necessity of Research work and of spending liberally thereon for the improvement of cultivation, for increasing the efficiency of factories and for the utilisation of the by-products of the Industry in the best possible manner. Expenditure on Research work should not be considered as fruitless, and it should be treated as profitable investment which will pay itself several times over, and the Government should earmark larger amount from its increasing excise revenue for this purpose in order to ensure the stabilisation of the industry, at an early date.

We have already shown in a table in the 'Sugar Industry at a Glance' how there has been an increase in the agricultural income from the improvement of the sugarcane crop and how it has benefited the Cultivators generally. The Imperial Council of Agricultural Research assessed the total increase due to the improvement of sugarcane crop, at 2¼ crores of rupees per annum.

*This difference has been removed, by the U. P. & Bihar Governments, since November, 1940.

It is computed that during the year 1939-40 the estimated amount of money paid to the cane cultivators was about Rs. 15,15,00,000 due to the high prices of cane.

Rs. 20 lakhs per annum on cane-research.

We suggest that a sum of not less than Rs. 20 lacs should be spent annually on Research Work. We endorse the recommendation of the Tariff Board (page 143) that the allotment from the Excise Fund should be raised from one anna to three annas per cwt. We also endorse their recommendation "that the only hope of the Industry ever being able to compete on equal terms with other countries, is a reduction in the price of raw material (*vide* Page 143.) The Tariff Board has also outlined various directions in regard to Research Work to be carried on for benefiting the industry.

Magnificent Development of the Industry.

The magnificent progress of the sugar industry can be a source of inspiration to other industries also and it is the duty of the Government of India to foster the spirit of industrialisation in the country by encouraging an industry like sugar, which has already made the country self-sufficient in the matter of an article of daily consumption within a brief period of six years and which has brought about amelioration to a large number of cultivators whose interests are indissolubly connected with the sugar industry. We strongly feel that the Government of India should also place large sums of money at the disposal of the Provincial Governments for making headway with the Provincial schemes. We would reiterate here that facilities should also be given for research work for improvement in the methods of manufacture of *gur* from cane and for encouragement of sugar from Palmyra, dates, cocoanut and other palms, as Gur-making is a very important village industry. As we have observed before, we feel strongly that the Government of India should give at least annas 3 per cwt. to the Provincial Government for purposes of improvement of the cane-crop, out of the revenue derived from the excise duty amounting to over Rs. 5 crores.

Future of Industry Depends on Increasing Yield of Cane.

The future of the sugar industry, we are convinced, depends upon the vigour with which research work is carried on in its various complex problems—agricultural, chemical and technological. It is hardly necessary to re-iterate here that the possibility of export of

sugar depends entirely on the success achieved in the direction of reduction of cost of production of cane by increasing the yield of cane crop per acre from 15 tons at present to at least 50 tons, and consequently a reduction in the cost of production of sugar (the cost of the raw material works out to about 55 per cent in the cost of manufacture of sugar) to a level which can compare with countries like Java, Cuba, Phillippines and Hawaii islands.

Subsidiary Industries like Confectionery, Syrups ect.

We feel that along with the utilisation of the by-products of the industry, efforts should also be made for the establishment of subsidiary industries like confectionery, syrups, fruit preservation etc. The import of confectionery alone in India during the year 1939-40 was valued at about 14 lakhs of rupees as compared with 18 lakhs in the year 1938-39 and that of canned or bottled fruits was valued at Rs. 10 lakhs in 1939-40 as compared with Rs. 12 lakhs in 1937-38. We feel that if suitable assistance is given, confectioneries like lozenges, sweets, toffees, etc., can be manufactured in large quantities in this country and a new industry can be established.*

One method in which assistance can be given by the Government would be to exempt the sugar required for the manufacture of confectionery from excise duty. A market also exists in the country for Demerara sugar, sugar cubes etc. We hope that the possibility of the development of such industries will not be ignored.

Estimate of cost of manufacture of sugar in factories.

It is difficult to arrive at any absolute figure of the cost of production in India. The cost would vary with the percentage of recovery obtained and the number of days a factory works etc. We feel, however, that it would be safe for the purpose of computation of the cost of manufacture, to take the figures recommended by the Tariff Board after a very careful enquiry on page 81 of their Report. The Sugar Syndicate has also furnished some figures of cost to the Governments of U. P. and Bihar during the year 1939. According to their calculations, the average cost of manufacture in U. P. and Bihar factories worked out to Rs. 2-2 6 per maund, during 1938-39,

*The South Bihar Sugar Mill of Bihar, the North Bengal Sugar Mill, and the Daurala Sugar Mill in U. P. we are glad to note, have commenced manufacture of confectionery since 1937-38. The South Bihar Mill is noted for its excellent toffes, jujubes, boiled goods and satins.

as against the Government's calculation of only Rs. 1-10 per maund of sugar.

Bihar Labour Enquiry Committee.

During 1938 the Government of Bihar appointed a Labour Enquiry Committee for investigating the problems relating to industrial labour in Bihar, and for making such recommendations as may appear practicable for the purpose of improving the level of wages, conditions of work, employment etc. The Committee submitted its report in April 1940. The *personnel* of the Committee was as follows :—

Dr. Rajendra Prasad, Chairman, Mr. R. R. Bakhale, Dy. Chairman, Mr. M. P. Gandha, Prof. Abdul Bari, M.L.A., Babu Jagat Narain Lal, M. L. A., Dr. Radha Kamal Mukherji, Mr. H. B. Chandra, M.L.A., and Mr. R. K. Saran, (Secretary).

The Report is now receiving the attention of the Bihar Government who have already commenced taking action on subjects like Sickness Insurance etc.

Export of Sugar by Sea essential.

In our last Annual we stated the conditions under which India was committed not to export sugar by sea to any country except Burma for a period of 5 years ending in 1942.

While the question of the export of sugar was of academical interest till 1939, till when India's production of sugar was not in excess of her requirements (and that explains why the industry did not interest itself in the removal of the ban) the question assumed considerable importance in 1940 and has been agitating the minds of the industry, the commercial community, the public and indeed also of the Government of India and of the Provincial Governments of U. P. and Bihar who are vitally interested in the matter.

The outbreak of the European War in 1939 has made the International Sugar Agreement inoperative due to various reasons, amongst which are the restriction of imports and exports of sugar to and from belligerent countries, alterations in the map of Europe as a result of several countries being treated as part of Germany, the consequent disturbance in the Export quota assigned to various countries, and violation of the terms of Agreement by them. The virtual suspension

*Vide 1938 Annual, pp. 155-158. The Agreement was signed in spite of the Assembly's Resolution and vigorous protests from the industry.

of the International Sugar Agreement as a result of the dislocation caused by the devastating war in Europe, and the availability of large surplus of sugar in India which must be exported, have, thus created within the last few months an entirely new state of conditions which the Government of India must examine, if necessary in consultation with the Empire Countries and the Government of the United Kingdom with a view to lift the ban on export of sugar from India by sea route immediately.

A serious effort was made during the year 1940 by the industry which approached the Government of India for being permitted to export sugar to the U. K. by releasing the country from the ban on export. The industry also expressed its preparedness to sell sugar at a heavy sacrifice in price as compared with the internal price of sugar in the country. (The offer was made for sale at about Rs. 4|- per maund ex-port delivery at any port in India as compared with the internal price of Rs. 12|- including the excise duty, which would be refunded in the case of export sugar) with a view to remove the dead-weight of the huge surplus. It is well-known that as a result of the dislocation caused by the war, the failure of the West Indies sugar crop and the restriction on sugar imports in the United Kingdom for a variety of reasons, the U. K. has had to go on ration in regard to sugar in 1940. At such a juncture, the Indian Industry was in a position to render valuable assistance to the U. K. as also other Empire countries by providing sugar at a reasonable rate in 1939-40 and also perhaps the next and thus make it possible for these countries to avoid inconvenience to its public in the matter of an important article of diet, and incidentally could also render suitable help to itself by removing this surplus production. It is a pity however that although the Government of India arranged for the offtake of Indian sugar (of quality D 24 and above) approximating to about 100,000 tons for the export to the U. K. which was negotiating for the purchase of exportable surplus sugar from Empire sources (Australia, Union of South Africa, Mauritius, Fiji, and British West Indies) the effort proved abortive inasmuch as the industry could not arrange to export the same due to there being insuperable difficulties in the removal of the sugar from the possession of Banks at a considerably low rate at which the U. K. offered to buy the same. As a consequence, negotiations for sale of sugar in the U. K. fell through.* The industry hopes however, that the Government of India will devote their most earnest attention to this problem and save the industry from the impending crisis by

enabling it to remove a substantial portion of its surplus production of about 300,000 tons in new markets, in 1941.

U. K. buys sugar from other countries.

It would be of interest to note here that the United Kingdom ranks, next to the United States, as the largest sugar importing country in the world. Of the 1938-39 imports in U. K. 54 per cent came from Empire sources, and the balance from Cuba, Dominion Republic, Peru and Java. The normal annual consumption of sugar in U. K. is about 2,300,000 tons. Due to rationing, the consumption in 1939-40 in U. K. will be of the order of 1,900,000 tons, of which about 1,400,000 tons will have to be imported the internal production being estimated at 510,000 tons in 1939-40. The quantity of sugar available in 1939-40 for the United Kingdom according to the latest information from Empire sources, stated in a preceding paragraph are as follows:—

Australia	564,000 tons
Union of South Africa	215,000 "
Marutitius	262,000 "
Fiji	127,000 "
British West Indies	518,000 "

India can supply about 300,000 tons in 1941 and in 1942.

In this connection it must be observed that India now produces a superior quality and higher grades of sugar equal to Java which are suitable for export and with a proper planning can ensure the supply of the stipulated quantity from year to year, which can be safely depended upon by any country with which arrangements are made.

While these negotiations were proceeding the Government of India succeeded in securing partial release from their obligations under the International Agreement and India was enabled to export of the United Kingdom up to 2 lakhs tons of sugar during the year ending 31st December, 1940. We hope that the Government of India will arrange for export up to 2 lakh tons during the year 1941 and also 1942 till the ban is lifted.

*Vide the green Pamphlet on Sugar Industry in India written by Mr. M. P. Gandhi and published at the instance of the Government of India on the occasion of the Eastern Group Conference in November, 1940. Mr. Gandhi has made a powerful plea for export subsidy and rebate in freights on sugar to be exported to the U. K.

*Sugar Production and Consumption in U. K. & other
Empire Countries.*

The sugar consumption in the U. K. for the year ended 31st August 1938 amounted to 23,88,000 tons. Of this quantity 14 per cent were home grown sugar while imported sugars made up the balance. This works out to 112.6 lbs. per capita. Much of the increase however is believed to have gone to the "invisible" supply. For the year 1939-40, however, it is expected that the consumption will be reduced to about 19,00,000 tons, because of the rationing programme instituted by the Government. The production of sugar in the U. K. during 1939-40 approximated to 5,10,000 tons. Thus it may be necessary to import in the neighbourhood of 14,00,000 tons. The Under Secretary of the Food Ministry told the House of Commons on the 29th May, 1940 that the United Kingdom will buy the entire exportable surplus sugar from Empire sources (Australia, Union of South. Africa, Mauritius, Fiji and British West Indies) Canada and New Zealand will also be associated with the United Kingdom in the purchases which are stated to involve 1,750,000 tons of which the United Kingdom will take 1,225,000 tons.

Canada's sugar production during 1938-39 amounted to 81,000 tons while the consumption during the last year amounted to 515,000 tons.

New Zealand does not produce any sugar, depending on imports to supply its requirements. The consumption of New Zealand is about 84,000 tons.

Latest estimates for the crop year 1939-40 for the Empire areas from which the United Kingdom is reported to be buying the available supply indicate that Australia will have a surplus of about 564,000 tons, Union of South Africa 215,000 tons, Mauritius 262,000 tons, Fiji 127,000 tons, British West Indies 518,000 tons; the total comes to 1,686,000 tons. There is no mention of the large exportable surplus which India has to the extent of about 3,00,000 tons and India would be pleased to ship the sugar to the United Kingdom at a reasonable price if shipping facilities are provided. It may be of interest to know that the United Kingdom ranks next to the United States as the largest sugar-importing country in the world. Amongst the British sources of supply of sugar to the United Kingdom the Union of South Africa supply 9 per cent. Mauritius 12 per cent, Australia 16 per cent, British West Indies 10 per cent and other British sources 3 per cent, the total amounting to 49 per cent, the quantity being

1,198,933 tons in 1938. Amongst the foreign sources, the important ones are Cuba 25 per cent, Java 6 per cent, San Domingo 11 per cent, the total foreign supply being 50 per cent and in quantity 1,218,540 tons. It may be of interest to know that the United Kingdom also exports sugar in fairly large quantities, the extent of the export in 1938 being 390,000 tons, the chief export centres being Estonia, Finland, Greece, Irish Free State, Norway, Switzerland, British Malaya, Uruguay (America) etc. (*Vide* Lamborn Sugar Market Report dated 26th September, 1939 and 4th June, 1940).

Java's increased manufacture and Export of Sugar.

A reference to the general conditions of the sugar industry in Java would be useful as it has an important bearing on the sugar industry in India. 80 sugar factories worked in Java in 1938 as against 81 in 1937. The area planted and harvested was 2,20,799 acres in 1938 as against 2,11,788 in 1937. The total quantity of cane harvested was 11,618,640 tons as against 11,915,314 tons in the previous year. The average yield of cane amounted to 55.36 tons per acre; the highest average yield for any group was 62.68 tons per acre while the lowest was 0.43 tons per acre. The average percentage recovery was 11.61 in 1938 as against 11.40 in 1937; the highest average recovery during 1938 for any group was 13.24 while the lowest was 10.03 per cent. The production of sugar in Java in 1938 was 13,98,927 metric tons. (*Vide* Indian Trade Journal, 30th May, 1940).

Java ranks next to Cuba as the largest sugar exporting country in the world whose export during the crop year ending 31st March 1940 approximated 12,14,125 tons of sugar as compared with 11,63,809 tons exported during the previous season. The 1939-40 shipments were the largest in 7 years since 1932-33 when the exports were 13,01,439 tons. Of the 12,14,125 tons exported during 1939-40 crop year, 860,047 tons were shipped to Eastern points (India, China, Japan, etc.) while 3,54,000 tons went to Western points (Europe etc.). During the previous year 5,87,349 tons went to Eastern destinations while 576,460 tons went to the Western territory.

The final figure of production of sugar in Java for 1937-38 is 13,92,000 tons while for 1938-39 is reported to be 13,76,000 tons and in 1939-40 15,50,000 tons. After calculating the domestic consumption at 3,11,500 tons it is estimated that Java had a carry over on

*The average yield of cane in India is remarkably low, being only about 16 tons per acre.

April 1, 1940 of approximately 2,31,000 tons as against a carry over of 2,06,000 tons on April 1, 1939. The 1940 crop in Java is estimated at 15,50,462 tons. (*Vide* Lamborn Sugar Market Report dated 9th July, 1940).

Main Features of the Industry in Bombay and Madras.

In the preceding pages, we have dealt with the Indian Industry as chiefly concentrated in U. P. and Bihar which produce about 79 per cent of the total sugar manufactured in the country. In view of the growing importance of the industry in Bombay and Madras, we are giving the main features of the industry in those Provinces also.

Main features of the industry in Bombay in 1938-39.

The majority of the factories in Bombay grow nearly all their cane. Only just recently, the Government had allowed two crops in 5 years, but it has now been altered to 3 crops in 5 years, which is of considerable assistance, as in cases where factories have increased their crushing capacity, it has meant a lessening in the leasing of land.

All the indigenous varieties of cane such as Pundia have disappeared, and these have been replaced by special tropical canes such as POJ, 2878, E.K. 28, CO. 290, the latest variety being CO. 490.

The season 1939-40 was possibly not quite so good as the preceding one, in that the tonnage of cane per acre was slightly lower, which may be put down to diverse climate conditions, and the recovery of sugar to cane was also slightly down in most instances. Diseases and pests were normal but the Grasshopper pest is one which has to be carefully watched: some damage was done in certain areas, mostly in cane grown by the small cultivators.

The new variety of cane, CO. 490 has so far given satisfactory results, it is a heavy yielder and is a fairly late ripener.

The 1940-41 Crushing Season commenced about the 15th September, and all the Deccan factories were working by the beginning of November, 1940.

The system of supplying water by measurement has been introduced by the Bombay Government and this has not had a favourable reception. The method adopted is to be tried for a period of three years and then reviewed.

The profits of the industry were very attractive during 1939-40 season.

Main features of the Industry in South India in 1939-40.

We give below a note reviewing the main features of the Industry in South India.

The industry in South India during the year generally did well as a result of the high prices for sugar. This enabled factories to crush at a profit and at the same time pay ryots a good price for cane which enabled them to obtain their requirements without difficulty.

The serious position in the North due to overproduction caused uncertainty but sugar prices remained at a level which enabled local factories to clear their stocks. The unstable conditions of the industry due to troubles in the North have had their reactions in the South and until the position in the U. P. and Bihar is stabilised there can be little confidence in the future. Recent events in the North have clearly shown that more control is necessary if the industry is to survive after the period of protection at present granted by the Central Government is withdrawn or considerably reduced.

Production in South India last year was 86,800 tons including Mysore, Hyderabad and Travancore, while the total consumption is expected to reach 120,000 tons.

The production in these three Indian States was 30,000, 10,000 and 3,400 tons respectively leaving Madras Presidency production at 40,000 tons.

Cane prices were fixed by the Government at 12 rupees per ton for all varieties in Hospet area but in other districts no rates were fixed.

In 1939-40 the Indian Southern Provinces Sugar Marketing Board continued to function and the membership increased from 8 to 11.

The Mysore Sugar Factory commenced crushing on the 25th July, 1939 and was shut down on the 27th May, 1940. The total number

of milling days was 267. The factory at Mysore benefited a great deal from the high prices of sugar and even shared the high prices of sugar with the ryots by giving them a bonus.

The area under sugar cane in Mysore was also increased but the prices of jaggery fell to very unremunerative levels. The Mysore Government made attempts to find out and introduce other commercial and cash crops such as irrigated cotton, tobacco, mulberry, plantains, potatoes, etc. under Krishnarajasagara reservoir under which out of 1,20,000 acres that will become irrigable, about 60,000 have already been brought under irrigation.

The most popular variety of cane among the ryots who supply cane to the factory is H. M. 320. This cane is evolved by the Mysore Government Agricultural Department. It stands on the land unharvested for a period of 12 to 18 months without deterioration. Other promising varieties are H. M. 661 and H. M. 647 and also CO. 419. The average yield per acre is about 28 tons.

The Indian Southern Provinces Sugar Marketing Board was affected by the sugar selling policy adopted by the Indian Sugar Syndicate in reducing prices for granting rebates to various Ports. Their contention is that the Sugar Syndicate would not be able to sell more sugar in their area as a result of this policy and such action would only result in depressing prices for themselves and for the factories in the South. The Indian Southern Provinces Sugar Marketing Board offered its co-operation to the Syndicate in the sale of the sugar but they felt that no response was forthcoming to this suggestion of theirs.

International Sugar Agreement and Export Quotas.

The International Sugar Agreement was signed in May, 1937, by representatives of Governments of 21 major sugar producing countries of the world, including India. The head-quarters of the International Sugar Council is at London. This Council determines from time to time the export quotas for the various countries in relation to the free market requirements. The basic export quota for the various exporting countries for the year is fixed from year to year but this machinery has been put of gear due to the outbreak of the

Great War and the agreement may be taken for all purposes to be a dead letter.

Continuance of Agreement favoured yet!

A meeting of the International Sugar Council was held in January 1941 and was attended by delegates representing 70 out of a total 100 votes. A special Committee was also set up for studying the present and postwar statistical position regarding sugar. But the most important decision related to the International Sugar Agreement the continuance of which was unanimously favoured by the delegates present. They also decided that without creating a precedent the export quotas adopted for the markets during the 3rd quota year would be maintained during the 4th quota year ending 31st August, 1941. This decision was however subject to review in the event of a radical change in the world situation during the course of the current year.

India's case ignored.

It is really pathetic to think that the delegates assembled took no interest in regard to the changed position of India in respect of production of sugar. In 1940 the International Sugar Council had agreed to exempt India from the obligations of the agreement inasmuch as she was allowed to export up to 2 lakhs tons of sugar to the U. K. No such export, however, came off and it was expected that the Council would have considered this question and in view of India's present position would have allowed her to export sugar at least to the neighbouring countries by releasing her from the obligations. We wonder whether India was represented at this meeting and, if so, whether her representative took care to explain the correct situation and press for a release from India's obligations not to export sugar. The sugar interests in this country have doubtless reason for being disappointed at this state of affairs and we suggest that they should represent matters once again to His Majesty's Government through the Government of India and obtain permission for exports in 1941 in order to assist the sugar industry in this essential manner. The ban will automatically be lifted in 1942.

World Production and Consumption of Sugar.

The world's consumption of sugar for the year 1938-39 comes to 29,406,000 tons as compared with 29,647,000 tons in 1937-38. We give

below a table showing the statistics of world's production and consumption of sugar for the year 1938-39:—

TABLE NO. 13

*World's Production and Consumption of Sugar in Lond Tons
for the year 1938-39**

	Production	Consumption
Total World (long tons, raw)	29,642,000	29,323,000
<i>North America.</i>		
United States	2,097,000	5,965,000
Total North America	8,065,000	7,178,000
Total South America	2,248,000	1,875,000
<i>Europe.</i>		
Germany	2,114,000	2,054,000
France	876,000	1,035,000
Russia	2,260,000	2,280,000
United Kingdom	414,000	2,340,000
Total Europe	8,669,000	11,499,000
<i>Asia.</i>		
China	410,000	660,000
India**	4,090,000	4,200,000
Papanese Empire	1,550,000	1,190,000
Java	1,500,000	325,000
Philippines	974,000	77,000
Total Asia	8,548,000	7,372,000
Total Africa	1,186,000	924,000
Total Australia	790,000	358,000
Grand Total	29,642,000	29,323,000

*Of the total world production of sugar viz., 29,643,000 tons in 1938-39 about 18,000,000 tons represents production of cane sugar and 11,000,000 tons represents the production of best sugar.

It will also be seen from the above table that while the consumption of sugar in Europe is 11,499,000 tons, it produces only 8,669,000 tons.

**It will be noted from the above table that India ranks as the largest sugar producing country in the world with about 14 per cent. of the total world production to her credit. It is a matter of gratification to find that India which was the birth place of sugar (as also of the textile industry) has continued to lead in the matter of production of Sugar. This figure includes not only the manufacture of white sugar but also Gur or raw sugar produced in India.

The world production, consumption and carryover of stocks for the last 8 years is given in a Table in "The Sugar Industry at a Glance." Vide Lamborn's sugar statistical bulletin, 25th February, 1939.

The world's *per capita* consumption of sugar during the year ending 31st August, 1939, amounted to 30.6 lbs. as compared with 31.1 lbs. in the previous year. The peak *per capita* consumption was recorded in 1936-37 when the figure was 32.3 lbs. The total consumption at that time amounted to 30,549,000 tons as against 29,406,400 tons in 1939. (*Vide* Lamborn Sugar Market Report dated 11th June, 1940).

Japan's position Res Sugar Production.

It may be of interest to note the position of sugar in Japan. During 1940-41 the estimated production of Japan is estimated at 1,176,000 tons as against 1,321,000 tons in 1939-40, a decrease of about 10 per cent. Of the 1,176,000 ton crop anticipated in Japan this season, 1,141,000 tons are expected to be produced from sugarcane and 35,000 tons from sugar beets. Sugar consumption in Japan during 1939-40 totaled 1,111,000 tons. For the current year, consumption is expected to show a decided fall because of the rationing programme being instituted in various parts of the Empire. (*Vide* Lamborn Sugar Market Report dated 21st January, 1941).

Sugar Production in Cuba.

The production of sugar in Cuba during 1939 was 27,59,938 tons and in 1940 2,816,462 tons. Cuba exported 2,625,000 tons in 1937, 2,531,000 tons in 1938 and 2,661,976 tons in 1939.

Comparative position of sugar factories in different parts of India.

We are giving below a statement showing the comparative position of sugar factories in different parts of India. A special Committee appointed by the Government of U. P. in 1938 for investigation into the question of the working of sugar factories in U. P. reported that U. S. and Bihar factories suffered a handicap to the extent of Rs. 2-8-0 per maund of sugar, as compared with the factories outside. The table below will indicate the directions in which the factories in U. P. and Bihar suffer as compared with the factories in Indian States and the rest of British India :—

TABLE NO. 14

Comparative position of Sugar Factories in different parts of India

U. P. and Bihar.	Indian States.	Provinces outside U. P. and Bihar in British India.
1. High prices of cane fixed by law.	Free market.	Free market.
2. High wages fixed by law. (0-6-0 minimum).	No law.	No law.
3. Cess: originally $\frac{1}{2}$ anna and now $\frac{3}{4}$ anna per maund on cane or as 11 per maund on sugar.	No. cess.	No cess.
4. Co-operative Society charges: about annas two per maund of sugar.	No charges.	No charges.
5. Short season.		Very much longer season in the West and the South.
6. Recovery 9.3%.		10% to 12% in the West and the South.
7. Income-tax, Super-tax and Excess Profits Tax.	No tax.	Income-tax, Super-tax and Excess Profits Tax
8. No concessions.	Concessions of land and/or refund of Excise Duty in part or in whole in one form or another.	No concessions.
9. No such relief.	Import duties on outside sugar and freedom from taxes.	No such relief.
10. Not so.	In most cases big farms are owned; and very little tax is paid due to the bulk of the income being considered as derived from farms.	Not so.
11. No exemption.	No Excise duty in case of Palmyra sugar.	In the South no Excise duty on Palmyra sugar.

U. P. and Bihar.	Indian States.	Provinces outside U. P. and Bihar in British India.
12. Competition with the Khandsari which is free from all the above mentioned charges.	No competition.	No competition.
13. Freight—disadvantage computed at over Re. 1 in marketing 75% of sugar to other distant provinces.	Smaller disadvantage.	Practically no disadvantage.
14. Storage cost and interest charges as sugar can only be sold by quotas, having to be carried forward for more than 10 months.	No costs. Sold immediately.	No costs. Sold immediately.
15. Restriction of production by quotas leading to higher manufacturing charges.	No disadvantage.	No disadvantage.
16. Molasses Return from low.	Higher.	Higher.
17. Municipal tolls on transport of cane carts.	No disadvantage.	No disadvantage.
18. Implicit obedience to Rules, Regulations and Returns of various sorts, made under Control Act, on pain of heavy penalties.	Complete freedom.	Complete freedom.
19. No.	No	High Irrigation charges in Bombay.

Outlook for the Sugar Industry for 1940-41.

We have already referred in detail to the position of the industry in the previous year. As far as the year 1940-41 is concerned, the production of sugar will be considerably decreased and it is not unlikely that a fairly large portion of the cane crushed in U. P. and Bihar will remain uncrushed in view of the decision of the U. P. and Bihar Governments to manufacture only 7,20,000 tons of sugar during the year 1940-41. As has been explained in previous pages, the-

production of sugar has been restricted because of the huge carry-over of sugar from the previous year and the difficulties, financial and others, of carrying larger stocks of sugar to the next season. The consumption of sugar is more or less stationary and it is expected that in order to reduce the carry over of sugar the production of sugar in U. P. and Bihar, the two principal sugar producing provinces of India, will have to be further restricted to about $5\frac{1}{2}$ lakh tons during 1941-42. The situation, it is expected, will correct itself in 1942, when proper planning will be effective in regard to the production of sugar and development of cane, with a view to avoid cycles of over-production and under-production which have very undesirable effects on all concerned.

Unutilised cane crop in 1940-41, proposed compensation.

During the year there has been a considerable controversy in regard to the appropriate methods of utilising the cane crop which is likely to go waste in U. P. and Bihar. Dr. Rajendra Prasad has taken a particular interest in this matter in view of the disastrous effect on the cultivators if the cane crop is unutilised. The Governments of U. P. and Bihar have, however, decided not to flinch from their previous decision, viz., to manufacture 720 lakhs of tons only in U. P. and Bihar. In order to compensate the growers to some extent the Governments of U. P. and Bihar decided to reduce the price of cane from 0-4-6 to 0-4-3 and to increase the cane-cess from 9 pies to 1 anna. The proceeds of the additional cess thus imposed, observed the Governments of U. P. and Bihar, would form "the nucleus of a fund from which compensation will be paid to cane-growers in areas which normally would have supplied cane to factories but where, due to restriction of sugar production, cane will remain uncrushed and be incapable of utilisation in other ways." To this fund Government would add a "contribution of comparable proportions from provincial revenues which, it should be noted, will be comparably less than the return which the growers might secure by converting his cane into gur." Dr. Rajendra Prasad in a statement issued on the 20th February, 1941 asked the Governments of U. P. and Bihar to announce without delay details of the scheme of compensation they have in view and suggested that compensation should not be nominal but should be substantial. He stated that the Government of Bihar will realise 10 lakhs rupees by way of compensation fund and rupees 10 lakhs by way of provincial cess thus making a total of about 21 lakhs. The Government of U. P. will realise almost double this amount. Dr. Rajendra Prasad pressed the Government to add a suitable amount in order to "avert

the impending ruination of the tenantry of the country who form the backbone of the community." We hope that the Governments of U. P. and Bihar will in appreciation of the situation spare a larger amount of revenue, as otherwise a large number of cultivators will be very adversely affected. From economic as also political motives, the Government should tackle the problem very liberally.

Assistance to industry by Provincial and Central Governments necessary.

We would also reiterate here that the most important problem now before the industry is that of improvement of cultivation of cane and of reduction of the cost of production of cane as upon that alone will depend the future stability of the industry in the country. We trust that the Government of India will give their fullest consideration to the observations made in this behalf by the Tariff Board who have recommended that larger grant should be made by the Government for purposes of research work into the question of the improvement of cultivation of cane, with a view to improve the yield of cane per acre, the quality of the cane as also the sucrose contents, etc.

The Industry deserves the fullest support from the various Provincial Governments also in regard to this matter. With a larger revenue accruing to the Government of India from the yield of the Excise Duty on Indian sugar amounting to over 5 crores of rupees per year, and with the additional revenue accruing to the Provincial Governments of U. P. and Bihar from the levy of the cess of canes consumed by factories at the rate of 0-0-6 per md. (0-0-3 in 1940-41) it should be possible for them to earmark larger amounts of money for being spent on objects which would lead to the development of the sugar industry on sound and scientific lines.

As in the case of cultivators whose interests have been fully safeguarded by the Provincial Governments of U. P. and Bihar, by fixing prices of cane calculated to give a handsome profit, the industry also needs a measure of sympathy from the Provincial Governments, and it should be allowed to make fair profits like the various other industries of the country. The bulk of capital invested in the industry is national and it naturally expects a reasonable profit on the investment.

Assistance to Industry by Governments and Legislatures.

We hope that the Government of U. P. and Bihar which have taken such a keen interest in the promotion and development of this

industry and have saved it from the impending catastrophe in the 1937 season by passing the Sugar Factories Control Act, will continue to do so, and will also bring pressure on the Government of India to do all that is essential for the reduction of the cost of production of cane and also of sugar, for utilisation of by-products like molasses and bagasse, for spending liberally on Research Work, for regulating on an All-India basis the further expansion of the industry in a manner which would avoid over-production of sugar which is harmful to all interests concerned, and for developing a suitable Central Marketing Organisation comprising all sugar factories in the country with a view to prevent wasteful competition amongst the factories and to ensure a steady supply of sugar in an economical manner at the cheapest rate in order to safeguard the interests of the consumers and incidentally to encourage the consumption of sugar, which is remarkably low at present, by the people of the country, and generally to create favourable conditions for the consolidation of the industry on the lines indicated in the previous pages, in order that the industry may be able to do with the minimum of protective tariff, within a short time.

We also trust that the members of the Central Legislatures will take an interest in devising measures for the proper development and regulation of this great National Industry, particularly, when the question of the grant of further protection to the Industry comes up for discussion during the 1940-41 sessions of the Legislature.

All-India Control essential

We would like to emphasise once again the necessity of all-India control of the industry with a view to bring about a stability in the industry and to prevent inter-provincial competition which would be ruinous to the Provinces of U. P. and Bihar which have developed the sugar industry immediately after the grant of protection.

Need of All-India marketing Organisation.

We would also emphasise the necessity of the Government of India taking suitable steps to ensure that there is no overproduction of sugar, as otherwise it will continue to have a very undesirable effect on the industry. Similarly it is also essential for the Government of India to promote a scheme of all-India control of the industry and particularly a scheme for an all-India marketing organization to conduct the sales of sugar of all factories in India. While such an organization

may fail to achieve the object of limiting unregulated expansion of the Industry, it would certainly remove some of the present defects in the working of the sugar trade at present and may be felt to be helpful by the trade.

Indian Sugar Industry's commendable Progress.

Since the grant of protection to it, in April 1932, the sugar industry* has made a magnificent progress which is a matter of pride to the country, and it is the duty of the Governments, Central as well as Provincial, to devise such measures as will pave the way for the stabilisation of this second largest national industry of India, with which the interests of not less than 20 million cultivators are intimately associated, which finds employment for about 2,500 University Graduates, 100,000 unskilled labour, which has prevented the annual drain of about Rs. 1,60,00,000 for the import of sugar, which has been responsible for the development of the village industry of Gur manufacture, and which represents an investment of national capital estimated at about Rs. 3,20,00,000. The safety the progress of such estimated at about Rs. 3,20,00,000. The safety the progress of such an important industry the second largest national industry of the country must, we suggest receive the sympathetic consideration of every one anxious to promote the welfare of the country.

*In Appendix I, we have given a complete list of sugar factories in India, working as well as projected with full names and addresses of their Managing Agents, details as to their capacity, nearest Railway Station etc., etc.

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Do You Know That !

- (1) The Indian Sugar Industry,*— the second largest national industry of the country—represents investment of capital to the extent of Rs. 32 crores.
- (2) The total annual value of sugar and gur produced is Rs. 75 crores.
- (3) The industry gives employment to 2500 graduates, 1,00,000 skilled and unskilled workers, and interests not less than 20 million cultivators.
- (4) The industry helps to retain in the country a sum of Rs. 16 crores which was being sent to Java and other countries for supply of sugar to us.
- (5) The cane factories in the country paid an amount of about 15 crores to the cultivators in the 1939-40 season for the cane supplied by them.
- (6) The establishment of this industry has led to the manufacture of power alcohol and other subsidiary industries.
- (7) India has become fully independent of other countries in the matter of supply of sugar, and indeed is capable of exporting sugar of an acceptable superior quality to other countries, if a little encouragement and facilities are given to that end.
- (8) The policy of protection has been fully vindicated by the magnificent growth and development of this industry.
- (9) The production of Gur has increased, along with the acreage under cane, and the acreage under improved varieties which latter has resulted in an additional income to the growers estimated at Rs. 25,000,000 *per year*.
- (10) That such an industry must receive the sympathetic attention of all concerned.

GANDHI & CO.

*Vide 1940 Indian Sugar Industry Annual.

APPENDIX 1.

(The Indian Sugar Industry—1939 Annual)



LIST OF SUGAR MILLS IN INDIA & BURMA
WORKING AND PROJECTED
(Season 1938-39)

DETAILED LIST OF SUGAR MILLS (VACUUM PAN) IN INDIA (1939-40).¹

(Including Gur Refineries)

EXPLANATION:—

Asterisk in the last but one column denotes mills which have also got Gur-refining plants.

† Mills marked thus did not work this season.

‡ " " " are reported to be under construction.

"S" = Sulphitation. "DS" = Double Sulphitation.

Name of Factory, with full name and address of Managing Agents or Proprietors.

Location.

District.

"C" = Carbonatation.

Nearest Railway Station.

"DC" = Double Carbonatation.

Nearest Steam Station.
Daily cane-crushing capacity in tons.

(2)

BENGAL

1. North Bengal Sugar Mills Co., Ltd. M/A. Soorajmull Nagarmull, 61, Harrison Road, Calcutta, (Tel. Sugar, Calcutta).	Gopalpur, (Tel. Sugar— Gopalpur).	Rajshahi.	Gopalpur, E.B.R. Saraghat.	1200*	DS
2. Setabganj Sugar Mills, Ltd., M/A. Soorajmull Nagarmull, 61, Harrison Road, Calcutta, (Tel. Sugar, Calcutta).	Setabganj, (Tel. Sugar— Setabganj, E. B. Ry.)	Dinaipur.	Setabganj, Do. Manihari.	700*	DS
3. Sree Radha Krishna Sugar Mills, Ltd., M/A. Jhajarhia Brothers, Ltd., 138, Harrison Road, Calcutta, (Tel. Sugarsweet, Calcutta).	Beldanga, (Tel. Sugarsweet —Beldanga.)	Murshidabad.	Beldanga, Do. Lalgola, E.B.R.	550	DS

4. The Ramnugger Cane & Sugar Co., Ltd., M/A. Anderson, Wright & Co., 7, Wellesly Place, Calcutta.	Plassey P.O.	Nadia.	Plassey	Do.	Do.	500/600	DS
5. Carew & Co., Ltd., M/A. Lyall Marshall & Co., 4, Fairlie Place, Calcutta.	Darsana.	Nadia.	Darsana,	Do.		1500	DS
6. The Deshbandhu Sugar Mills, Ltd., M/A. The Industrial Agency, 58, Patuatuly, Dacca, (Tel. Deshbandhu, Dacca).	Charsindur.	Dacca.	Ghorashal (Flag) A.B.R.		Sultanpurghat.	250	DS
7. †Shikarpur Sugar Mills, M/P. Raja P. D. Raikut, M.L.A., (Baikunthapur Raj) Jalpaiguri, (Tel. Office Jalpaiguri).	Shikarpur, P.O. Belacoba.	Jalpaiguri.	Belacoba, E.B.R.		Dhubri.	150	()
8. Dayamayee Jayanti Sugar Mills, Ltd., M/A. Advancement of Industries (Bengal), Ltd., H. O. Kishoreganj, (Tel. Dayamayee).	P. O. Kishore- ganj	Mymensingh.	Kishorganj, A.B.R.			300	
9. Rajluxmi Sugar Mills, M/A. Kartick Bose & Sons, Dr. Bose's Laboratory, Ltd., 45, Amherst Street, Calcutta, (Tel. Lactic, Calcutta).	Maitra Bagan, Basirhat.	24 Parganas.	Maitra Bagan Ry. Siding B. B. L. R.			75	S

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	District.	Nearest Railway Station.	Nearest Steamer Station.	Daily cane-crushing capacity in tons.
BIHAR					
1. Sakri Sugar Works of The Darbhanga Sugar Co., Ltd., M/A. Octavius Steel & Co., Ltd., 14, Old Court House Street, Calcutta, (Tel. Lapizando, Calcutta).	Sakri P.O. (Tel. Sakri Sugar Works, Sakri).	Darbhanga.	Sakri, B.N.W.R.	Semaria Ghat.	700 S
2. Lohat Sugar Factory of The Darbhanga Sugar Co., Ltd., M/A. Octavius Steel & Co., Ltd., 14, Old Court House Street, Calcutta, (Tel. Lapizando, Calcutta).	Lohat, P.O. (Tel. Lohat Factory, Lohat).	Do.	Pandaul,	Do.	1300 S
3. Ryam Sugar Co., Ltd., M/A. Begg, Sutherland & Co., Ltd., P. B. 21, Cawnpore, (Tel. Begg, Cawnpore).	Ryam Factory P.O. (Tel. Ryam Factory, Tarsarai).	Do.	Tarsarai,	Do.	778 C
4. Samastipur Central Sugar Co., Ltd., M.A. Begg, Sutherland & Co., Ltd., P. B. 21, Cawnpore, (Tel. Begg, Cawnpore).	Samastipur (Tel. Central—Samastipur.)	Do.	Samastipur,	Do.	700 S

5.	New India Sugar Mills, Ltd., M/A. Birla Brothers, Ltd., 8, Royal Exchange Place, Calcutta. (Tel. Lucky, Calcutta).	Hassanpur Rd., P.O. Hassanpur Sugar Mills, (Tel. "Birla" Hassanpur Sugar Mills.) Semapur.	Do.	Hassanpur Road.	Do. Semaria Ghat Monghyr Ghat and Khagaria Ghat.	1300	DS
6.	Semapur Sugar Works of The Purnea Sugar Co., Ltd., M/A. Octavius Steel & Co., Ltd., 14, Old Court House Street, Calcutta, (Tel. Lapizando, Calcutta). †Matangini Sugar & Dal Mill. Pro. Dinesh Chandra Roy, Zeminder	Purnea.	Do.	Semapur	Do. Manihari.	700	
7.	Japaha Sugar Factory, M/P. S. & G. Richardson and others, Muzaffarpur, (Tel. Richardson, Muzaffarpur).	P.O. Hem-kunja Japaha, Bhicanpore Factory P.O.	Do	Muzaffarpur.	Do. Paleza.	500	S
8.	Motipur Sugar Factory, Ltd., M/JD. Seth Haji Abdul Rahim Oosman, 2, Rajmohan Street, Calcutta, (Tel. Muslim—Calcutta).	Motipur (Tel. Sattar, Motipur)	Do.	Motipur.	Do.	1000 13000	DC
10.	Belsund Sugar Co., Ltd., M/A. James Finlay & Co., Ltd., 1, Clive Street, Calcutta, (Tel. Mercator, Calcutta).	Righa P.O. (Tel. Mitha, Righa)	Do	Riga,	Do. Semaria.	850	DS
11.	Champaran Sugar Co., Ltd., Barrah Factory, M/A. Begg, Sutherland & Co., Ltd., P. B. 21, Cawnpore, (Tel. Begg, Cawnpore).	Bara-Chakia P.O. (Tel. Cane, Bara-Chakia.)	Champaran.	Chakia,	Do. Paleza.	900.	C

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	District.	Nearest Railway Station.	Nearest Steamer Station.	Daily cane-crushing capacity in tons.
12. Sree Hanuman Sugar Mills, Ltd., M/A. Daulatram Rawatmull, 178, Harrison Road, Calcutta, (Tel. Gulaseed—Calcutta).	Mothari (Tel. Sugar- Mothari.)	Champeran.	Mothari, B.N.W.R.	Paleza.	600* DS
13. The Sugauli Sugar Works, Ltd., M/D. Md. Hanif & Asjadali, 3, Rajmohan Street, Calcutta.	Sugauli.	Do.	Sugauli, Do	Do.	900 DS
14. Motilal Padampat Sugar Mills Co., Ltd., H. O. Cawnpore, (Tel. Motipat, Cawnpore).	Majhauria. (Tel. Motipat, Majhauria.)	Do.	Majhauria, Do.	Do.	1000 S
15. Champagan Sugar Co., Ltd., Champati Factory, M/A. Begg, Sutherland & Co., Ltd., P. B. 21, Cawnpore, (Tel. Begg—Cawnpore).	Chanpatia, (Tel. Chansuco, Chanpatia.)	Do.	Chanpatia, Do	Do.	900 S
16. Pursa Sugar Factory, M/A. Pursa, Limited, P. O. Lauriya, Champaran, (Tel. Fuzze, Lauriya). Pursa.	Pakri Lauriya, P.O.	Do.	Do. Do.	Do	500/600 DS
17. New Swadeshi Sugar Mills, Ltd., M/A. Birla Brothers, Ltd., 45/47, Apollo Street, Fort Bombay. (Tel. Lucky, Bombay).	Narkatiaganj. (Tel. Birla, Narkatiaganj)	Do	Narkatiaganj, Do.	Do.	900 DS

18.	Harinagar Sugar Mills, Ltd., M/A. Narayanlal Bansilal, 207, Kalbadevi Road, Bombay, (Tel. Maryada, Bombay).	Ramnagar. (Tel. Maryada- Ramnagar Champaran.)	Do.	Harinagar.	Do.	1400 1500	DS
19.	Ganga Devi Sugar Mills, Ltd., M/A. Marwari Brothers, Narainpore, Bagaha P.O., (Tel. Ganga, Bagaha).	Bagaha P.O.	Do.	Bagaha.	Do.	650	DS
20.	Gaya Sugar Mills, Ltd., Managing Director, Mr. Guru Sharan Lal.	Guraru. P. O. Guraru- Mills. (Tel. Sugar- mills.)	Gaya.	Guraru, E.I.R.	Patna.	750 850	DS
21.	The South Bihar Sugar Mills, Ltd., M/A. Nirmal Kumar Jain & Co., Devashram, Arrah, (Tel. Jineshwar, Arrah).	Bihta. (Tel. Sugar, Bihta.)	Patna.	Bihta.	Do.	1200	DS
22.	Dumraon Raj Sugar Factory, Pro.—Maharaja Bahadur, Dumraon Raj, P. O. Dumraon, Dist. Shahabad. Now under:—Lessee, Ram Prasad Gupta, Zamindar & Banker, Arrah.	Bikramganj. P. O. Bikram- ganj).	Shahabad.	Bikramganj, A.S.L.R	Sinha.	550	DS
23.	Rohtas Industries, Ltd., M/A. Dalmia Sabharwal Jain & Co., P.O. Dalmianagar (Shahabad). (Tel. Sugar, P.O. Dalmianagar).	P.O. Dalmia- nagar.	Do.	Dehri-on-Sone, E.I.R.	Buxar.	1800	DC

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	District.	Nearest Railway Station	Nearest Steamer Station.	Daily cane crushing capacity in tons.
24. Ganga Deshi Sugar Factory, Ltd., M/D. Behari Lal, Buxar, (Tel. Sugar—Buxar).	Buxar. P.O. Buxar- Gajadharganj.	Shahabad.	Buxar, E.I.R.	Buxar.	100*
25. Sitalpore Sugar Works, Ltd., M/D. Ghosh & Dutta, 93, Dharamtolla Street, Calcutta, and Indian Press Buildings, Allahabad, (Local office: Sahibganj, Chapra).	Sitalpore, (Tel. Kamala Sitalpore, B.N.W.R.)	Saran	Sitalpore, B.N.W.R.	Baghi.	800 DS
26. Cawnpore Sugar Works, Ltd., Marhowrah Factory, M/A. Begg, Sutherland & Co., Ltd., P. B. 21, Cawnpore, (Tel. Begg, Cawnpore).	Marhowrah, (Tel. Marsuco, Marhowrah)	Do.	Mahowrah, Do.	Marhowrah	900 DC
27. †Maharajanji Sugar Factory, Mortgagee: The Peoples Bank of Northern India, Ltd., 10, Abbott Road, Lahore, (In Liquidation).	Maharajanji.	Do.	Maharajanji, Do.	Revelganj.	300*
28. The Behar Sugar Works, of the Industrial Corporation, Ltd., M/A. Bakubhai Ambalal & Co., P. B. 28, Ahmedabad, (Tel. Molas—Ahmedabad). H. O. Bastion Road, Fort, Bombay, (Tel. Indus—Bombay).	Pachrukhi (Tel. Indus, Pachrukhi).	Do.	Pachrukhi, Do.	Pa'ezaghat.	1100 DC

New Siwan Sugar & Gur Refining Co., Ltd. M/s. Andrew Yule & Co., Ltd., & Clive Row, Calcutta. (Tel. Yuletide—Calcutta).	SiwanSiwan. (Tel. Sugar, Siwan).	Do.	Savan,	Do	Savan O.A	800	DS
Indian Sugar Works. M/P. Manvi Mohd. Abdul Razaque, P. O. Siwan, Dist., Saran, (Tel. Indian—Siwan).	Siwan.	Do.	Do	Do.	Do.	700	
Siwan Deshi Sugar Factory, Prop. Messrs. Noori Mian & Co., Bhatni (Gorakhpur).	Do.	Do.	Do	Do	Do.	Gur only.	
Bharat Sugar Mills, Ltd., M/A. Birla Bros., Ltd. 8, Royal Exchange Place, Calcutta, (Tel. Lucky—Calcutta).	Sidhwalia, (Tel. Birla— Sidhwalia)	Do.	Sidhwalia,	Do	Revelganj	800	DS
Sasa Muso Sugar Works, Ltd. M/A. Mausell & Co., Ltd., P.B. 2164, Calcutta. (Tel. Diogenes—Calcutta).	Sasa Muso (Tel. Factory— Sasa Musa).	Do.	Sasa Musa, B N W.R.		Palezaghat.	600	DS
The Vishnu Sugar Mills, Ltd., M/A. Bilasrat Banarsilal & Co., Agakhan Building, Dalal Street, Fort, Bombay, (Tel. Brijbilas—Bombay).	Gopalganj (Tel. Vishnu— Gopalganj).	Do	Harkhua,	Do	Revelganj	800	DS
S. K. G. Sugar, Ltd., M/A. Dalmia Jain & Co., Ltd., P. O. Dalmianagar, Dist. Shahabad, (Tel. Sugar—P. O. Dalmianagar Chupra).	Hathua, P.O. Mirganj, (Tel. Krishna— Mirganj & Chupra).	Do.	Hathua,	Do	Palezaghat and Semariaghat.	1400 1500	DS

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	District	Nearest Railway Station.	Nearest Steamer Station.	Daily cane- crushing capa- city in tons.
UNITED PROVINCES					
1. Purlabore Co., Ltd., M/A. Begg, Sutherland & Co., Ltd., P. B. 21, Cawnpore, (Tel. Begg, Cawnpore).	Mairwa, (Tel. Sucrose— Mairwa).	Gorakhpur.	Mairwa, B.N.W.R.	Revelganj.	740 DC
2. Noori Sugar Works, Prop. Noori Mian & Co., Bhatni, (Tel. Noori—Bhatni).	Bhatni	Do	Bhatni.	Do. Barhaj.	700 DS
3. Shree Sitaram Sugar Co., Ltd., M/A. Karamchand Thapar & Bros., Ltd., 5, Royal Exchange Place, Calcutta. (Tel. Spiritual—Calcutta).	Baitalpur, P.O. Deoria, (Tel. Spiritual— Baitalpur, B N. W.)	Do	Baitalpur.	Do. Do.	800 DS
4. Cawnpore Sugar Works, Ltd., Gauri Factory, M/A. Begg, Sutherland & Co., Ltd., P.B. 21, Cawnpore, (Tel. Begg—Cawnpore).	Gauribazar, P.O. (Tel. Gaurisuco Gauribazar)	Do	Gauri Bazar, Do.	Do. (30 miles)	700 800 DS
5. Deoria Sugar Mills, Ltd., M/A. Karamchand Thapar & Bros., Ltd., 5, Royal Exchange Place, Calcutta, (Tel. Spiritual—Calcutta).	Deoria, (Tel. Spiritual— Deoria)	Do.	Tahsil Deoria,	Barhaj.	900 DS
6. The Mahaswastika Sugar & Industrial Corpn., Ltd., M/A. Badridass Satyanarain & Co., Deoria, (Tel. Swastika, Deoria).	Deoria.	Do.	Do.	Do.	300 DS

7. Saraya Sugar Factory, Senior M Partner, S. B. Dr. Sir Sundar Singh Majithia, Sardarnagar, (Tel. Majithias—Sardarnagar).	Sardarnagar.	Do.	Sardarnagar, Do.	Do.	2000	DS
8. Diamond Sugar Mills, Ltd., M A. Murarka & Sons, Ltd., 4-E, Dalhousie Square, Rooms Nos. 28 & 29, 2nd Floor, Stephen House, Calcutta, (Tel. Canesugar—Calcutta).	Pipraich, (Tel. Diamond —Pipraich) B. N. W.).	Do.	Pipraich, Do.	Do.	700 800	DS
9. Pipraich Sugar Mills, Ltd., M A. Mr. Mohammad Ashfaq, B.A., General Manager, (Tel. General Manager—Pipraich Mills).	Pipraich (Tel. Pipraich (Mill—Pipraich)	Do.	Do. Do.	Do.	300	8
10. The Shankar Sugar Mills, Ltd., M A. Inderchand Hariram, Captainganj.	Captainganj, (Tel. Shankarji, Captainganj).	Do.	Captainganj, Do.	Do.	800	DS
11. The Punjab Sugar Mills, Ltd., Managers, Messrs. Narang Bros. & Co., Ltd., 3, Montgomery Road, Lahore, (Tel. Narang—Lahore).	Ghughli. (Tel. Factory- Gaughli).	Do.	Ghughli, Do.	Do.	800 850	DS
12. Mahabir Sugar Mills, Ltd., M A. Dwarkadas Bajinath, Siswa Bazar.	Siswa Bazar, (Tel. Mahabirji —Siswa Bazar).	Do.	Siswa Bazar, Do	Do.	650	DS

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location	District.	Nearest Railway Station.	Nearest Steamer Station.	Daily cane-crushing capacity in tons.
13 The Vishnu Pratap Sugar Works, Ltd., MID. R. K. Krishna Pratap Narain Singh and Kr. Ravi Pratap Narain Singh of Padrauna. (Tel. Sugar, Rejabazar Khadda).	Khadda.	Gorakhpur.	Khadda, B.N.W.R.	Barhaj.	400 S
14 The Lakshmi Devi Sugar Mills, Ltd., M/A. Messrs. Agarwal & Co., P. O. Chhitauni.	Chhitauni.	Do.	Chhitauni.	Do.	400/600 DS
15 Iskwarei Khetan Sugar Mills, Ltd., M/A. Devidutt Surajmull, Padrauna, Gorakhpur. (Tel. Khetan—Padrauna).	Lakshmiganj, (Tel. Khetan- Lakshmiganj).	Do.	Lakshmiganj.	Do	500* S
16 The Ramkola Sugar Mills Co., Ltd., H. O. Nawashahr (Hazara), R. B. Lala Isher Das, M.A., LL.B., M.L.A., Via Abbottabad. Nawashahr, Via Abbottabad, N. W. F. P., Chairman, Lala Balmokand Shah Sawhney, Managing Director, (Tel. Timber-Nawashahr, Hazara).	Ramkola, (Tel. Sugar- Ramkola)	Do.	Ramkola.	Do. Revelganj	700/900 DS
17 Maheshwari Khetan Sugar Mills, Ltd., M/A. Messrs. Devidutt Chaturbhuj, P. O. Ramkola, (Tel. Khetan—Ramkola).	Ramkola.	Do.	Do.	Do Barhaj.	700/750 DS

18.	Padrauna Rajkrishna Sugar Works, Ltd., M/D R. B. Jagadish Narain Singh, "JAGDISH GARH" Padrauna, (Tel. Krishna—Padrauna).	Do.	Pardauna, Do.	Do.	800	₹
19.	Jagadish Sugar Mills, Ltd., M/A. Raja Bahadur Brijnarayan Singh & Co., Padrauna, (Tel. Jagadish—Padrauna).	Do.	Kathkuiyan, Do.	Do.	400	DS
20.	The United Provinces Sugar Co., Ltd., M/A. James Finlay & Co., Ltd., 1, Clive Street, Calcutta. (Tel. Mercator—Calcutta).	Do.	Tamkohi Rd., Do	Do.	925	DS
21.	Ganesh Sugar Mills, Ltd., M/A. Poddar Jaipuria & Co., P. 23, Vivekananda Road, Calcutta, (Tel. Jaipuria, Calcutta).	Do.	Pharenda, Do.	Do.	700	DS
22.	Ledi Sugar Factory, Lessees:—EL.—Baha Bhargava & Co., P. O. Nichlaul (Gorakhpur), (Tel. Shiyama, Siswabazar).	Do.	Siswa Bazar, Do	Do.	80	S
23.	Campierganj Sugar Mills, Ltd., M/D. K. B. M. Nesarullah, Esq., B.A., M.L.C. (Tel. Nesarullah, Gorakhpur).	Do.	Compierganj, Do	Do.	300	DS

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location	District	Nearest Railway Station	Nearest Steamer Station.	Daily cane-crushing capacity in tons.
24. The Pashupati Industrial, Agricultural & Sugar Corporation, Ltd., Nautanwa, Nautanwa.	Nautanwa	Gorakhpur	Nutanwa, B.N.W.R.	Barhaj.	
25. The Madho Kanhaya Mahesh Gauri Sugar Mills, Ltd. Munderva, (Tel. Jagdish, Munderva).	Munderva, (Tel. Jagdish, Munderva).	Basti.	Munderva, Do.	Do.	600/700 DS
26. Basti Factory of The Basti Sugar Mills Co., Ltd., M/A. Narang Bros. & Co., Ltd., 3, Montgomery Road, Lahore, (Tel. Narang, Lahore).	Basti (Tel. Sugar Factory, Basti).	Do.	Basti, Do.	Ajodhyaghat	875/900 DC
27. Walterganj Factory of The Basti Sugar Mills Co., Ltd., M/A. Narang Bros. & Co., Ltd., 3, Montgomery Road, Lahore, (Tel. Narang, Lahore).	Walterganj. (Tel. Sugar Walterganj).	Do.	Walterganj, Do.	Do.	700/800 DS
28. The Popular Sugar Co., Ltd. Liquidator, Mr. I. B. Banerji, High Court, Allahabad.	Barhni, P. O. Ramduttganj, (Tel. Popsko, Barhni, B.N.W.)	Do.	Barhni, Do	Barhaj.	800/1000 DS
29. Shriromani Sugar Mills, Ltd., M/A. Lal G. B. Pal & Co., C/o. The Traders Bank, Ltd., Lahore	Khalilabad (Tel. Sugar Mills, Khalilabad).	Do.	Khalilabad, Do	Do.	400

(14)

	Katra.	Do.	Do.	100/150	Rs
30. †Lakramandi Sugar Mills Co., Ltd., Lakramandi, MJA. EL.—Baha' Bhargava & Co., P. O. Nichlaul (Gorakhpur), (Tel. Lakramandi Sugar Co., Katra) (B. & N. W. Ry.).	Lakramandi (Gonda), P. O. Nawabganj	Gonda.			
31. The Seksaria Sugar Mills, Ltd., MJA. Gowindram Ramnath & Co., 219, Chittaranjan Avenue, (North), P. O. Beadon Street, Calcutta, (Tel. Seksariaco, Calcutta).	Babnan. (Tel. Seksariaco, Bebnan).	Do.		800	DS
32. Nawabganj Sugar Mills Co., Ltd., MJA. Narang Bros. & Co., Ltd., 3, Montgomery Road, Lahore, (Tel. Narang, Lahore).	Nawabganj. (Tel. Sugar Mills, Nawab- ganj, Gonda).	Do.		1850	DS
33. Balrampur Sugar Co., Ltd., Balrampur Factory, MJA. Begg Sutherland & Co., Ltd., P. B. 21, Cawnpore, (Tel. Begg, Cawnpore).	Balrampur. (Tel. Balsuco, Balrampur).	Do		700	DS
34. †Balrampur Sugar Co., Ltd., Tulsipur Factory, MJA. Begg, Sutherland & Co., Ltd., P. B. 21, Cawnpore, (Tel. Begg, Cawnpore).	Tulsipur. (Tel. Talsuco, Tulsipur).	Do.		700	S
35. Gulzarimall Ramchand Sugar Mills, Shahalmi Gate, Lahore, (Tel. Mala, Lahore).	Jarwal Road, (Tel. Mala, Jarwal Road).	Bahraich.		750	DS

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	District	Nearest Railway Station.	Nearest Steamer Station.	Daily cane-crushing capacity in tons.
36. The Burhwal Sugar Mills Co., Ltd., M/A. Durga Shankar Dayaram, Collector (Cawnpore). (Tel. Ganeshi, Cawnpore).	Burhwal, (Tel. Ganeshi, Burhwal).	Barabanki	Burhwal B N W R. & E I R.	Ajodhyaghat.	300* DS
37. Gokarimall Ramchand Sugar Mills, Shahalmi Gate, (Tel. Mala, Lahore).	Aishbagh, (Tel. Mala, Lucknow).	Lucknow	Aishbagh, E. I R.	Do.	750* DS
38. Ratna Sugar Mills Co., Ltd., M/A. Kashiprasad & Co., 107, Street Field Rd., Benares City, (Tel. Ratna, Benares).	Shahganj, (Tel. Ratna, Shahganj, Jaunpur).	Jaunpur.	Shahganj, Do	Balla	500 DS
39. Shree Krishna Deshi Sugar Works, Lessees, Shervani Bros. & Co., Ltd., Jhusi.	Jhusi, Shervani (Tel. Shervani Bros. Jhusi, Dist, Allahabad).	Allahabad	Jhusi, B N W R.	Do.	400* S
40. Tribeni Deshi Sugar Works, Prop. A. Beniprasad, Naini, (Tel. Madho, Naini).	Naini.	Do	Naini, E I R & Buxar G I P R.		200 S
41. The Lakshmi Sugar & Oil Mills, Ltd., Managing Director—Lala Bansidhar,	Hardoi, (Tel. Lakshmi)	Hardoi.	Hardoi, E I R.	Do	1400 DS
42. The Seksaria Biswan Sugar Factory, M/A. M/S. Govindram Bros., Ltd., Seksaria Chambers, 139, Meadows Street, Fort, Bombay, (Tel. "Fairtrade," Bombay).	Biswan, (Tel. Factory, Biswan)	Sitapur.	Biswan, B N W R	Ajodhyaghat	1200 DT

* Factory is not working for the last four seasons but is expected to work during the forthcoming one.

43. The Oudh Sugar Mills, Ltd., M/A. Birla Bros., Ltd., 45/45, Appollo Street, Fort, Bombay, (Tel. Lucky, Bombay).	Hargaon, (Tel. Birla— Hargonsugar Mills).	Sitapur.	Hargaon, R.K.R. Ajodhyaghat.	1850	DS
44. The Lakshmi Sugar Mills Co., Ltd., Chairman, Rai Bahadur Seth Ram Rattan, 24, Mozang Road, Lahore, (Tel. Seth, Lahore).	Maholi, (Tel. Lakshmi— Maholi).	Do.	Maholi, E.I.R. Buxar.	1600	DS
45. Aira Sugar Factory, P.O. Aira Estate, Dist. Kheri, U.P., Prop. Indra Singh & Sons, Ltd., Tatanagar, (Tel. Wireforms, Tatanagar).	Khamaria, (Tel. "Aira", Lakhimpore— Kheri).	Kheri.	Lakhimpur, R.K.R. Barhaji.	650	DS
46. The Hindusthan Sugar Mills, Ltd., M/A. Bachhraj & Co., Ltd., 395, Kalbadevi, Bombay, (Tel. Shree, Bombay).	Golagokaran Nath, (Tel. Shree-Golago- karan Nath).	Do.	Golagokaran Nath, R. K. R. Do.	1800	DS
47. Rosa Rosa Sugar Works & Industry of Carew & Co., Ltd., M/A. Lyall Marshall & Co., 4, Fairlie Place, Calcutta, (Tel. Ghat, Calcutta).	Rosa, (Tel. Carew, Rosa).	Shahjahanpur.	Rosa Jn. E.I.R.	700*	S
48. H. R. Sugar Factory, Ltd., M/D. Sahu Ram Narain Sahib, Nekpur, Bareilly	Bareilly, (Tel. Sugar— Bareilly)	Bareilly.	Bareilly Jn Buxar. E.I.R R.K.R.	750	S
49. Khandke Sugar Mills, Ltd., M/A. D. N. Khandke & Co., 63, Bhandari St, Bombay No. 4, (Tel. Progress, Bombay).	Baheri, (Tel. Khandke, Baheri).	Do.	Baheri, R.K.R. Barhaji.	295	S

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	District.	Nearest Railway Station.	Nearest Steamer Station.	Daily cane-crushing capacity in tons.
50. The Kesar Sugar Works, Ltd., M/A. Kishchand Devchand & Co., 45/47, Apollo Street, Bombay, (Tel. Seeds, Bombay).	Baheri, (Tel. Kesar— Baheri).	Bareilly.	Beheri.	R K R. Barhaj.	1400 DS
51. L. H. Sugar Factories and Oil Mills, Ltd., Pilibhit, Pilibhit. * MJD. Sahu Jagdish Prasad, Pilibhit.	Pilibhit, (Tel. Crystal— Pilibhit).	Pilibhit.	Pilibhit.	Do.	1750 S (Double Tramdem).
52. Raza Sugar Co., Ltd., M/A. Govan Bros. (Rampur), Ltd., Rampur State.	Rampur, (Tel. Razaco— Rampur).	Rampur State.	Rampur.	E.I.R. Buxar.	1000 DS
53. Buland Sugar Co., Ltd., M/A. Govan Bros. (Rampur), Ltd., Rampur State.	Rampur, (Tel. Buland— Rampur State).	Do.	Do.	Do.	1000 DC
54. Upper Ganges Sugar Mills, Ltd., M/A. Birla Brothers, Ltd., 8, Royal Exchange Place, Calcutta, (Tel. Lucky, Calcutta).	Seohara	Bijnor.	Seohara.	Do.	1300 DS
55. Sethi Shiv Prasad Banarsidas Sugar Mills, Prop. Messrs. Shiv Prasad Banarsidas Aggarwala, Bijnor. 85, Lake Road, Lahore, (Tel. Bindal, Lahore).	(Tel. Aggarwal, Bijnor).	Do.	Bijnor.	Do.	1100 1200 DS
56. The Ganga Sugar Works, M/A. The Ganga Glass Works, Balawali, Bijnor.	Balawali.	Do.	Balawali.	Do.	100 (Cane) 15½ (Gr).

§ Factory is not Working Since 1937, it is not certain whether it will work at all.

		Do.	Dhampur,	Do. Buxar.	₹25	₹
58.	The Dhampur Sugar Mills, Ltd., MID. Kunwar Murl Manohar, Kothi Bansmaudi, Bareilly.	Dhampur, (Tel. Sugar Mills, Dhampur).				
59.	Jailakshmi Sugar Co., Ltd., MID. Jishnu Lal, Esq., H. O. Doiwala.	Doiwala, (Tel. Jailakshmi, Doiwala).	Doiwala,	Do. Karachi.	350*	DC/DS
60. †	Jwalapur Sugar Factory,	Jwalapur.	Saharanpur.		250	
61.	The Ganga Sugar Corporation, Ltd., College Road, Rawalpindi, Chairman—R. B. I. Isher Dass, M.A., LL.B., M.L.A., (Tel. Gansuco, Rawalpindi).	Deoband, (Tel. Sugar, Deoband).	Deoband, N.W.R.	Do.	600	DC
62.	Rai Bahadur Narain Singh Sugar Mills, Ltd., MID. S. S. Ranjit Singh, 2, Curzon Road, New Delhi.	Lhaksar, (Tel. Sugar, Lhaksar [n. E.I.])	Lhaksar,	E.I.R.	1000 1200	DS
63.	The Lord Krishna Sugar Mills, Ltd., Regd. Office, 85, Lake Road, Lahore, MID. Seth Shiv Prasad, (Tel. Bindal, Lahore).	Saharanpur, (Tel. Krishna, Saharanpur).	Saharanpur, N.W.R.	Do.	1250	DS
64.	Upper Jumna Swadeshi Sugar Mills, Co., Ltd. M/A. Harraj Swarup, Rajendral & Brothers, Muzaffarnagar, (Tel. Swesugmill—Muzaffarnagar)	Mansurpur, (Tel. Swesug Mill, Mansurpur).	Mansurpur, N.W.R.	Karachi.	1000 1200	DS

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	District.	Nearest Railway Station	Nearest Steamer Station.	Daily cane-crushing capacity in tons.
65. Upper India Sugar Mills, Ltd., M/D. P. Srikrishna Deva Bhargava, M.A. Mitra Mandal, Khatauli, (Tel. Sugar, Khatauli).	Khatauli,	Muzaffarnagar	Khatauli, N W. R.		1000 DS
66. Amritsar Sugar Mills Co. Ltd., M.D. Srdar Amar Singh Sahab, Amritsar (Punjab), (Tel. Refiners, Amritsar).	Rohanakalan, P.O. Rohana Mills, (Tel. Refiners, Muzaffarnagar)	Do.	Rohanakalan	Buxar	1000* DS
67. Upper Doab Sugar Mills, Ltd., M/A. Hariraj Swarup Rajendralal Debi Prasad & Brothers, Muzaffarnagar, (Tel. Swesugmill—Muzaffarnagar).	Shamli, (Tel. Sugar mills—Shamli.)	Do.	Shamli, S S L R	Bombay	1400 DS
68. The Diwan Sugar Mills, Prop. Messrs. Dhanpatmal Diwanchand, Lyallpur, (Punjab), (Tel. Dhanpat, Lyallpur)	Sakhoti-Tanda, (Tel. Diwan Mills, Sakhoti-Tanda N W. R.)	Meerut	Sakhoti-Tanda, N W R.	Do.	700* DS
69. Dauralal Sugar Works, Prop. Delhi Cloth and General Mills Co., Ltd., Delhi, (Tel. Yam, Delhi)	Daurala	Do.	Daurala, Do		1200 DC
70. Jaswant Sugar Mills, Prop. Lala Jaswantrai Churamani, M.A., Meerut, (Tel. Godfearing—Meerut).	Meerut City.	Do.	Meerut City, Do	Buxar.	650* DS

71. Ram Luxman Sugar Mills, Managing Proprietors, M/S. Dina Nath Nanakchand & R. S. Chitrnaji Lal & Sons, Rais and Millowners, Sadar Bazar, Delhi, (Tel. Consult.—Delhi).	Mohiuddinpur, (Tel. Sugarmills, Mohiuddinpur, N. W.).	Do.	Mohiuddin- pur, Do.	Do.	600 800*	DS
72. Modi Sugar Mills, Ltd., M/A. Rai Bahadur Multanimul & Sons, Patiala, (Tel. Multanimul, Patiala).	Modinagar, Begambad, (Tel. Modimills, Begambad)	Do.	Begambad, Do.	Do.	700 1000	DS
73. Simbhaoli Sugar Mills, Ltd., Chairman, Lt. Sardar Raghubir Singh Sandhanwalla, O.B.E., (Tel. Sandhanwalla, Simbhaoli, E.I.).	Simbhaoli, P.O. Baksar.	Do.	Simbhaoli, E.I.R.	..	400	DS
74. The Punjab Sugar Mills Co., Ltd., M/A. Narang Brothers & Co., Ltd., 3, Montgomery Road, Lahore, (Tel. Narang—Lahore).	Kichha, (Tel. Sugar Factory, Kichha)	Naini Tal.	Kichha, R.K.R.	Burhaj	800	DS
75. L. H. Sugar Factories & Oil Mill, Ltd., M/D Sahu Jagdish Prasad Sahib, Pilibhit.	Kashipur, (Tel. Crystal, Kashipur)	Do.	Kashipur, Do.	Do.	500	DS
76. The Neoli Sugar Factory, Prop. The Saraswati Sugar Syndicate, Ltd., 4, McLeod Road, P. B. 255, Lahore, (Tel. Sucrose—Lahore).	Manpore, Nagaria, (P.O. Neoli) (Tel. Sucrose, Neoli, Etah)	Etah.	Manpore- Nagaria, R.K.R.	Burhaj	450 600	DS
77. The Unao Sugar Mills, Lessee, Mr. S. B. Chowdhury, R.A., 1, Canal Bank Road, Lahore.	Unao.	Unao.	Unao E. I. R. & B.N.W.R.	Buxar.	Gur only 75	

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	District.	Nearest Railway Station.	Nearest Steam Station.	Daily cane-crushing capacity tons.
78. Kamlapat Motilal Gutsaiya Sugar Mills, Prop. Messrs. Kamlapat Motilal, P. B. 69, Cawnpore, (Tel. Lalmoti-Cawnpore).	Cawnpore, P.O. Cawnpore	Cawnpore.	Rawatpur, B.B. & C.I.	Buxar.	Cane 1000 Gur 100
79. † Cawnpore Sugar Works, Ltd., Cawnpore Refinery, MJA. Begg, Sutherland & Co., Ltd., P. B. 21 Cawnpore, (Tel. Begg, Cawnpore).	Cooperganj,	Cawnpore.	Cawnpore, E.I.R.	Do.	Gur only 73
80. Experimental Sugar Factory, Imperial Institute of Sugar Technology.	Nawabganj,	Do.	Rawatpur, B. B. & C. I.	Do.	24*
81. Bajinath Balmakund Sugar Mills, Prop. M/S. Bankey Behari Lal Singhania, Anwarganj, Cawnpore.	Anwarganj,	Do.	Anwarganj B.N.W.R.	Burhaj.	Gur only 27
82. Amroha Sugar Factory, Prop. The Ganesh Floor Mills Co., Ltd., Delhi, (Tel. Ganesh, Delhi).	Amroha, (Tel. Ganesh),	Moradabad	Amroha, E.I.R.	Buxar.	400 DS
83. † The Ajudhia Sugar Mills, Prop. Lakshmiji Sugar Mills Co., Ltd., 24, Mozang Road, Lahore, (Tel. Seth, Lahore).	P.O. Ajudhia Sugar Mills.	Do.	Raja-Ka Sahaspur	Do.	1000 DS

PUNJAB.

1. Jagatjit Sugar Mills Co., Ltd., M/A. Narang Brothers & Co., Ltd., 3, Montgomery Road, Lahore. (Tel. Narang—Lahore).	Phagwara, (Tel. Sugar Factory, Phagwara)	Kapurthala State.	Phagwara, N.W.R.	Karachi.	700	DS
2. ††Malik Sugar & General Mills, Phulcrwan,	Phulcrwan,	Sargodha.	Phulcrwan, Do.	Buzar.	100	
3. The Gujranwala Sugar Mills Co., Ltd., M/A. Narang Bros. & Co., Ltd., 3, Montgomery Road, Lahore. Sing & Co., Ltd., Civil Station, Gujranwala, (Tel. Sugarmills—Gujranwala).	Rahwali, (Tel. Sugarmill —Rahwali.)	Gujranwala.	Rahwali, Do.	..	300 450	DS
4. The Amritsar Sugar Mills Co., Ltd., M/D. Sardar Amar Singh, Amritsar, P.O. Khalsa College, Amritsar.	Gr. Trunk Road, Amritsar, Amritsar,	Amritsar.	Amritsar, Do.	Do.	Gur only 42 tons.	
5. †The Lakshmi Sugar Mills Co., Ltd., M/D. B. Bansidhar Saheb, Chatwind Gate, Amritsar.	Chatwind Gate, Amritsar,	Do.	Do. Do.	Do.	Gur only 400 mds.	
6. †Shree Guru Arjan Dev Sugar Mills, M/A. Seth Sundar Singh, Butari.	Butari,	Do.	Butari Do	Do.	Gur only.	
7. Saraswati Sugar Mills, Prop. The Saraswati Sugar Syndicate, Ltd., 4, McLeod Road, P.O. Box No. 255, Lahore, (Tel. Sucrose, Lahore).	P.O. Abdullapur Ambala, (Tel. Saraswati —Abdullapur)		Jagadhri, N.W.R	Do.	450	DS

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location	District.	Nearest Railway Station.	Nearest Steamer Station.	Daily cane-crushing capacity in tons.
8. †The Pattoki Sugar Works, Pattoki, Prop. The Amritsar Distillery Co., Ltd. Amritsar	Pattoki.	Lahore.	Pattoki, N.W.R.	..	100
<u>ORISSA.</u>					
1. Aska Sugar Works & Distillery, Prop. Messrs. Damodar Sahu & Brothers, (Tel. "Messequite", Aska).	Aska.	Ganjam.	Berhampur, B.N.R.	..	100 120*
2. Jeypur Sugar Co., Ltd., M.D. G. Subha Rao, B.Sc., C. E., (Glasgow), Rayaghada, (Dist. Koraput), (Tel. Jeysoo, Rayaghada).	Rayaghada.	Koraput.	Rayaghada, B.N.R.	Vizagapatam.	150

MADRAS.

1. The Vizagapatam Sugar & Refinery, Ltd., Vizagapatam, M/A. Messrs. Andhra Engineering Co., Ltd., Vizagapatam, (Tel. Engineers—Vizagapatam).	Thummapala, (Tel. Sugars—Anakapalli)	Vizagapatam.	Anakapalli, M.S.M.R.	Do.	125 DS
2. Etikoppaka Sugar Factory, M/A. The Etikoppaka Co-operative, Agriculture & Industrial Society, Ltd., (Tel. Sugar Factory Etikoppaka, Narsipatnam Road).	Etikoppaka	Do.	Narasapatam Road, M.S.M.R.	Do.	80 DS

3. The Sri Rama Sugar Mills, Ltd., Prop. Raja of Bobbili, Rajah of Venkatagiri and others, Bobbili, (Tel. Sugar—Bobbili).	Bobbili.	Viragapatam.	Bobbili, B.N.R.	..	150	DS
4. The Vuyyuru Co-operative Agricultural Industrial and Credit Society, Ltd., Vuyyuru, (Tel. Ramakistna, Vuyyuru).	Vuyyuru.	Kistna.	Bezwada, M.S.M.R.	..	850 1200	DS
5. Sree Ramkrishna Sugar Mills, Prop. Raja Ravi Ram Krishna Ranga Rao Bahadur, Zamindar of Kirlampudi, Bobbili.	Kirlampudi.	East Godavari.	Samalkot, M.S.M.R.	..	120	DS
6. The Deccan Sugar & Abkari Co., Ltd., M/A. Parry & Co., Ltd., P.B. No. 12, Madras, (Tel. Parry, Madras).	Samalkot, (Tel. Deccan— Samalkot).	East Godavari.	Samalkot, M.S.M.R.	Cocanada.	Gur only 40 tons.	C
7. The India Sugars & Refineries, Ltd., M/A. V. Ramalingam, Esq., Hospet.	Nellikuppam, (Tel. Distimulo —Nellikuppam).	South Arcot.	Nellikuppam, S.I.R.	Cuddalore.	1000*	DS
8. The India Sugars & Refineries, Ltd., M/A. V. Ramalingam, Esq., Hospet.	Hospet, (Tel. Sugars, Hospet).	Bellary.	Hospet, M.S.M.R.	..	500*	DS
9. Coimbatore Lakshmi Sugar Mills, Ltd., M/A. G.K.V.R. & Co., Podanur.	Podanur.	Coimbatore.	Podanur, S.I.R.	..	50*	
10. Al. Vr. St. Sugar Mills & Distillery, Prop. Al. Vr. St. Veerappa Chettiar, Zamindar of Devaram, Devakottah.	Tachanallur, (Tel. Sugarmill, Tachanallur.)	Tinnevely.	Tinnevely, Do. Jn.		Gur only 16 tons.	

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	Nearest Railway Station.	Nearest Steamer Station.	Daily crushing capacity in tons.
10. T. A. Ram Lakshmi Sugar Mills, Alwattirunagari.	Near Lakshmanapote.	Alwattirunagari.	Tuticorin.	Gur only 6 tons.
12. The Murugappa Sugar Co., Ltd., Mailpatti (N. Arcot).	Mailpatti.	Mailpatti, M.S.M.R.	..	50
13. The Southern India Sugar Co., Ltd., M/A. Ratnams, Limited, Pugalur.	Pugalur.	Pugalur, S.I.R.	Madras.	150
P.O. Velayuthampalayam (Tel. Sugars).				
TRAVANCORE STATE.				
1. The Travancore Sugars & Chemicals, Ltd., Secretaries & Treasurers, Parry & Co., Ltd., P. B. No. 12, Madras, (Tel. Parry—Madras).	Thackalay, (Tel. Sugars, Thackalay).	Trivandrum, S.I.R.	Trivandrum	Gur only 18
-MYSORE STATE.				
1. Mysore Sugar Co., Ltd., H. O. Senthil Bhawan Seshadri Road, Bangalore, (Tel. Mysugar—Bangalore).	Mandya, (Tel. Mysugar, Mandya).	Mandya, M.S.R.	..	1400 DS
BOMBAY.				
1. The Kolhapur Sugar Mills, M/A. Shirgaoker Bros., Shahupuri, Kolhapur, (Tel. Shirgaoker Brothers, Kolhapur).	Kolhapur, (Tel. Sugar-mills).	Kolhapur, M.S.M.R.	..	500 DS

2. The Saswad Mali Sugar Factory, Ltd., Sir Vithaldas Chambers, 16, Appello Street, Fort, Bombay.	Akluj, (Tel. Malisugar, Akluj).	Sholapur.	Pandharpur, B.L.R. Dksal, G.I.P.R.	..	350	DS
3. †The Birhan Maharashtra Sugar Syndicate, Ltd., M/A. C. G. Agashe & Co., Commonwealth Building, 980, Sadashiv Peth, Poona 2, (Tel. Shri, Poona).		Do.	Pandharpur, B. L. R.	..	300	
4. The Phaltan Sugar Works, Ltd., M/D. Vaman Sridhar Apte, Esq., 315, Girgaum Back Road, Bombay.	Pimpalwadi, Phaltan State, (Tel. Sakhar—	Satara.	Nira, M.S.M.R.	..	625/650 a.	
5. Kalam Sugar Works of Marsland Price & Co., Ltd., M/A. The Premier Construction Co., Ltd., Construction House Ballard Estate, (Tel. Marsprice—Bombay).	P.O. Kalam, Via. Baramati, (Tel. Marsprice —Baramati).	Poona	Baramati, D.B.R., Bombay.		1200	DS
6. The Ravalgaon Sugar Farm, Ltd., M/A. Walchand & Co., Ltd., Construction House Ballard Estate, Bombay, (Tel. Hinson, Bombay).	Ravalgaon, Nasik (Tel. Ravalgaon Farm, Malegaon Camp).	Nasik.	Manmad, G.I.P.R.	Do.	450	
7. The Belapur Co., Ltd., Managers, W. H. Brady & Co. (Ltd., Royal Insurance Building, Church Gate Street, Fort, Bombay, (Tel. Brix—Bombay).	Harigaoth, (Tel. Belapur Company— Belapur, G.I.P.Ry).	Ahmednagar.	Belapur, Do	..	650	DS

Name of Factory, with full name and address of Managing Agents or Proprietors.	Location.	District.	Nearest Railway Station.	Nearest Steam Station.	Daily crushing capacity in tons.
8. The Maharashtra Sugar Mills, Ltd., M/A. M. L. Dahanukar & Co., Ltd., Industrial Assurance Building, 3rd Floor, Opposite Church Gate Station, Fort, Bombay, (Tel. Sugarmills—Bombay).	P.O. Tilaknagar, Ahmednagar. (Belapur Road). (Tel. Sugarmills—Belapur Road)		Belapur, G.I.P.R. Bombay.		1000 1200 DS
9. The Belvandi Sugar Farm, Ltd., M/A. M. L. Dahanukar & Co., Ltd., Industrial Assurance Building, 3rd Floor, Opposite Church Gate Station, Fort, Bombay, (Tel. Design—Bombay).	P.O. Belvandi Sugar Farm, (Tel. Sugarfarm, Belvandi B.I.P.)	Do.	Belvandi, Do	Do.	250 300 DS
10. The Godavari Sugar Mills, Ltd., 79, Desouza Street, Vadgadi, Fort, Bombay.	Kanhegaon	Do.	400 500
<u>BARODA STATE.</u>					
i. The Gandevi Sugar Works & Distillery, Co., Ltd., M/A. Bachiraj & Co., Ltd., 395, Kalbadevi Road, Bombay.	Gandevi	Baroda.	Gandevi, G.B.R. Billimora, B.B. & C.I.R.	Billimora Bunder	250

SIND.

1. The Pioneer Sind Sugar Mills Co., Ltd.,
M/A. Mohatta & Co., Ltd.,
Wood Street, Karachi,
(Tel. Marketwala—Karachi).
Mohatta Nagar,
(Tel. Sindsugar,
Mohatta Nagar).
Mohatta Nagar,
Jodhpur Ry.

300

RS

CENTRAL INDIA.

1. The Jaora Sugar Mills,
Jaora (C. I.).
Jaora State.
Jaora, B.B. & C.I.
2. Bhopal State Sugar Industries,
(Chairman—The Economic Advisers,
Govt. of Bhopal).
Sehore.
Sehore.
3. †Shri Lakshmi Narayan Sugar Works,
Ltd.,
M/A. Gupta Bros. & Co.,
Harpalpur (Bundelkhand).
Harpalpur,
(Tel. Laxmichini,
Harpalpur).
Bundelkhand.
Harpalpur,
G.I.P.R.
4. †The Schindia Sugar Mills, Ltd.,
Dabra (Gwalior).
M/A. Latha Singh Bedi & Sons, Ltd.,
Clive Buildings, Block No. A,
8, Clive Street, Calcutta.
Dabra.
Gwalior.
Dabra, G.I.P.R.

450,600

750

RS

300

RS

750

RS

RAJPUTANA.

1. †Sri Ganganagar Sugar Mills, Ltd.,
M/A. Seth Sunder Singh.
Ganganagar.
Bikaner State.
2. The Mewar Sugar Mills, Ltd.,
M/A. Dhandania Kedia & Co.,
Karera (Udaipur State).
Karera
Udaipur State.
Karera, U. C. R.

600

RS

250,300

RS

Name of Factory, with full name
and address of Managing Agents
or Proprietors.

Location.

District.

Nearest Railway
Station.

Nearest Steamer
Station.

Daily cane-
crushing capa-
city in tons.

HYDERABAD. (Deccan).

1. The Nizam Sugar Factory, Ltd.,

Nizamabad,
M/A. H.E.H. The Nizam's Industrial
Trust Fund Represented by the
Hyderabad Construction Co., Ltd.,
Abto's Road, Hyderabad, Dn.

Bodhan,
(Tel. Sugar).

Hyderabad,
(Deccan).

Bodhan Sugar
Factory, Siding
Station (Nizam
St Ry.).

..

1000

DS

N. W. F. PROVINCE.

1. The Frontier Sugar Mills & Distillery,
Limited.

Takht-i-Bal.

Mardan.

Takht-i-Bal.

..

400|600

DC

BURMA.

1. The Sahmaw Sugar Factory of the
Burma Sugar Co., Ltd.,
(Tel. Clobertfeld, Rangoon).

Sahmaw,
(Tel. Shortis-
Sahmaw).

Myithyna.

Sahmaw, Burma
Rly.

..

800

DS

2. New Burma Amrit Sugar Mills, Ltd.,
M/A. Amritlal Ojha & Co., (Burma),
Ltd.,
'619, Merchant Street, Rangoon).
(Tel. Ojhaco—Rangoon).

Hninpale,
P.O. Billin,
(Tel. Amrit
Sugar Works).

Thaton,
(L. Burma).

Hninpale, Du.

..

400

DS

3. The Zeyawadi Sugar Factory, Ltd.,
M/D. Chandradeva Parkash Sinha,
Esq., Zeyawadi (Burma),
Tela Prakash, Rangoon).

Zeyawadi,
(Tel. Sugar,
Zeyawadi).

Toungco.

Zeyawadi.

Rangoon.

1000|1200

DS

**DISTRIBUTION OF SUGAR MILLS
IN INDIA, BY PROVINCES.
(1939-40).**

Province.	Cane Factories.	Gur refineries only.	TOTAL.
Bengal	9	..	9
Bihar	34	1	35
United Provinces	80	3	83
Punjab	5	3	8
Madras ..	10	3	13
Bombay	10		10
Central India & Rajputana ...	6	...	6
Other Provinces & States ...	7	1	8
TOTAL	161	11	172

Burma 3 ... 3

No. of factories (including Gur Refineries) actually
working in the season 1939 40 was approximetly. 150

No. of factories (including Gur Refineries) that
did not work during the season 1939-40 (Fac-
tories under construction iucluded.) ... 22

I.A.R.I. 75

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